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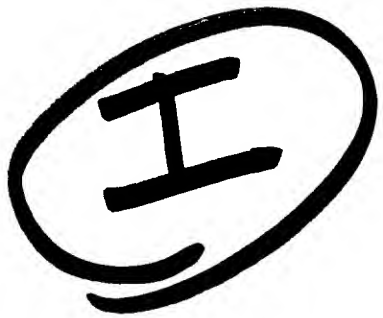
L1	340109	SEA ARSEN?
L2	173223	SEA (BRAIN# OR CRANIAL OR SPINAL CORD OR CENTRAL NERVOUS SYSTEM OR CNS) (5A) (CANCER? OR TUMOR? OR TUMOUR? OR NEOPLAS? OR MALIGNA?)
L3	194467	SEA NEUROBLASTOM? OR RETINOBLASTOM? OR GLIOBLASTOM? OR OLIGODENDROGLIOM? OR MENINGIOM? OR (MENING? (2A) (CARCINOM? OR CANCER? OR TUMOR?)) OR ASTROCYTOM? OR EPENDYMOM? OR OLIGODENDRO CYTOM?
L4	283	SEA L1 AND (L2 OR L3)
L5	114	SEA L1 (50A) (L2 OR L3)
L7	169	SEA L4 NOT L5
L8	123	DUP REM L7 (46 DUPLICATES REMOVED)



All Reviewed 9/03.

L8 ANSWER 1 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1
AN 2003:454072 CAPLUS
DN 139:30807
TI Methods and compositions for modulating the immune system and uses thereof
IN Chen, Lan Bo
PA Dana-Farber Cancer Institute, USA
SO PCT Int. Appl., 124 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003047524	A2	20030612	WO 2002-US38415	20021202

PI
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-334121P P 20011130

AB The present invention provides methods of preventing, treating or ameliorating one or more symptoms of disorders in which modulation of a subject's immune system is beneficial utilizing a lymphoid tissue inducing agent and an immunomodulatory agent. In particular, the present invention provides methods of preventing, treating or ameliorating a proliferative disorder, an infectious disease, a cardiovascular disease, an autoimmune disorder, or an inflammatory disorder or one or more symptoms thereof comprising administering to a subject in need thereof one or more lymphoid tissue inducing agents and one or immunomodulatory agents. The present invention also provides compns. and articles of manuf. for use in preventing, treating or ameliorating one or more symptoms assocd. with disorders in which modulation of a subject's immune system is beneficial, including, but not limited to proliferative disorders, infectious diseases, cardiovascular diseases, autoimmune disorders and inflammatory disorders. The present invention further provides methods for screening and identifying lymphoid tissue inducing agents and/or immunomodulatory agents.

IT **Brain, neoplasm**
(**ependymoma**; methods and compns. for modulating the immune system and uses thereof)

IT **Brain, neoplasm**
(medulloblastoma; methods and compns. for modulating the immune system and uses thereof)

IT Astrocyte
(neoplasm, **astrocytoma**; methods and compns. for modulating the immune system and uses thereof)

IT Meninges
(neoplasm, **meningioma**; methods and compns. for modulating the immune system and uses thereof)

IT Nerve, neoplasm
(**neuroblastoma**; methods and compns. for modulating the immune system and uses thereof)

IT Oligodendrocyte
(**oligodendroglioma**; methods and compns. for modulating the immune system and uses thereof)

IT Eye, neoplasm
(**retinoblastoma**; methods and compns. for modulating the immune system and uses thereof)

IT 50-78-2, Aspirin 51-21-8, 5-Fluorouracil 1327-53-3, **Arsenic** trioxide 6809-52-5, Geranylgeranylacetone 15502-74-6, **Arsenite** 30562-34-6, Geldanamycin 59865-13-3, Cyclosporine A 60203-57-8, Prostaglandin J2 70563-58-5, Herbimycin A
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. contg. microtubule stabilizing agents and HSP inducing agents; methods and compns. for modulating the immune system and uses thereof)

L8 ANSWER 2 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 2
AN 2003:221910 CAPLUS
DN 138:250703
TI Microcantilever apparatus for detection of enzymes and diagnostic applications
IN Bottomley, Lawrence A.; Ghosh, Madhushree; Shen, Shanxiang; Saul, Richard
PA Protiveris, Inc., USA
SO PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003023363	A2	20030320	WO 2002-US28920	20020911
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003068655	A1	20030410	US 2001-951131	20010912
PRAI	US 2001-951131	A2	20010912		

AB An app. and a method are provided for detecting an enzyme by measuring a change in deflection of a microcantilever having a substrate for the enzyme. The invention provides a method for detecting an enzyme, the method comprising: depositing a coating material on a first surface of at least one microcantilever; adding at least one substrate to the coating material, the substrate capable of interacting with the enzyme; exposing the microcantilever with the substrate to a sample; and measuring a deflection of the microcantilever, wherein the deflection indicates the presence of the enzyme in the sample. The substrate can be a biomaterial selected from the group consisting of a nucleic acid, a protein, a lipid, a hydrocarbon, and a polysaccharide. The invention is of use in proteomics, drug discovery, medical research, medical, veterinary, dental diagnostics, forensics, and military applications.

IT **Brain, neoplasm**
Coating materials
Coating process
Drugs
Fabry disease
Gaucher disease
Infection
Lesch-Nyhan syndrome
Liver, neoplasm
Lung, neoplasm
Mammary gland, neoplasm
Microarray technology
Mucopolysaccharidosis
Mycosis

Pancreas, neoplasm
Prostate gland, neoplasm
Stress, mechanical
Surface free energy
(microcantilever app. for detection of enzymes and diagnostic applications)

IT 1303-00-0, Gallium **arsenide**, uses 1310-53-8, Germanium dioxide, uses 1314-13-2, Zinc oxide, uses 1314-61-0, Tantalum pentoxide 1344-28-1, Aluminum oxide, uses 7429-90-5, Aluminum, uses 7440-05-3, Palladium, uses 7440-21-3, Silicon, uses 7440-21-3D, Silicon, compds. 7440-22-4, Silver, uses 7440-32-6, Titanium, uses 7440-47-3, Chromium, uses 7440-50-8, Copper, uses 7440-56-4, Germanium, uses 7440-57-5, Gold, uses 7631-86-9, Silicon oxide, uses 7782-40-3, Diamond, uses 12033-89-5, Silicon nitride, uses 12645-46-4, Iridium oxide 14808-60-7, Quartz, uses
RL: DEV (Device component use); USES (Uses)
(microcantilever app. for detection of enzymes and diagnostic applications)

L8 ANSWER 3 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:551303 CAPLUS
DN 139:95457
TI S-Dimethylarsinothiosuccinic acid, S-dimethylarsino-2-thiobenzoic acid and S-(dimethylarsino)glutathione as treatments for cancer
IN Zingaro, Ralph A.; Freireich, Emil L.; Dukale, Hatice; Kantarjian, Hagop; Verstovsek, Srdan; Sotelo-Lerma, Merida
PA Board of Regents, the University of Texas System, USA; Texas A & M University
SO PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003057012	A2	20030717	WO 2003-US281	20030107

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2002-346492P P 20020107
OS MARPAT 139:95457
AB **Arsenic** trioxide, an inorg. compd., is com. available anticancer agent, but it carries significant toxicity. Org. **arsenicals**, on the other hand, are much less toxic, to the extent that the methylation of inorg. **arsenic** in vivo into org. **arsenicals** has been considered a detoxification reaction. New org. **arsenic** derivs. have been synthesized, including S-dimethylarsinoglutatione, S-dimethylarsinothiosuccinic acid and S-dimethylarsinothiobenzoic acid, which have potent in vitro cytotoxic activity against numerous human tumor cell lines, both of solid and hematol. origin, as well as against malignant blood cells from patients with leukemia. The results form a basis for the development of S-dimethylarsinoglutathione, S-dimethylarsinothiosuccinic acid, S-dimethylarsinothiobenzonic acid, and other org. **arsenicals**, for anticancer therapy, combining high efficacy with very low, if any, toxicity. Compd. prepn. is included.
AB **Arsenic** trioxide, an inorg. compd., is com. available anticancer

agent, but it carries significant toxicity. Org. **arsenicals**, on the other hand, are much less toxic, to the extent that the methylation of inorg. **arsenic** in vivo into org. **arsenicals** has been considered a detoxification reaction. New org. **arsenic** derivs. have been synthesized, including S-dimethylarsinoglutatione, S-dimethylarsinothiosuccinic acid and S-dimethylarsinothiobenzoic acid, which have potent in vitro cytotoxic activity against numerous human tumor cell lines, both of solid and hematol. origin, as well as against malignant blood cells from patients with leukemia. The results form a basis for the development of S-dimethylarsinoglutathione, S-dimethylarsinothiosuccinic acid, S-dimethylarsinothiobenzonic acid, and other org. **arsenicals**, for anticancer therapy, combining high efficacy with very low, if any, toxicity. Compd. prepn. is included.

ST antitumor org **arsenical** toxicity redn; dimethylarsinothiosuccinate dimethylarsinothiobenzoate dimethylarsinoglutathione prepn cancer treatment

IT Antitumor agents
Apoptosis
Bone, neoplasm
Brain, neoplasm
Cell cycle
Esophagus, neoplasm
Head, neoplasm
Human
Kidney, neoplasm
Leukemia
Liver, neoplasm
Lung, neoplasm
Lymphoma
Mammary gland, neoplasm
Melanoma
Multiple myeloma
Myeloproliferative disorders
Neoplasm
Ovary, neoplasm
Pancreas, neoplasm
Prostate gland, neoplasm
Skin, neoplasm
Spleen, neoplasm
Stomach, neoplasm
Testis, neoplasm
(dimethylarsinothiosuccinic acid, dimethylarsinothiobenzoic acid, and dimethylarsinoglutathione as treatments for cancer)

IT 1327-53-3, **Arsenic** trioxide 66981-37-1 66981-38-2 69819-83-6 69819-84-7 69819-85-8 69819-89-2 69819-93-8 76235-27-3 76235-28-4 76235-34-2 76235-35-3 76843-55-5 76843-57-7 76843-59-9 76843-60-2 76843-63-5 76843-65-7 76843-68-0 76843-72-6 76849-01-9 560107-80-4
RL: PAC (Pharmacological activity); BIOL (Biological study)
(dimethylarsinothiosuccinic acid, dimethylarsinothiobenzoic acid, and dimethylarsinoglutathione as treatments for cancer)

IT 7440-38-2D, **Arsenic**, compds.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(dimethylarsinothiosuccinic acid, dimethylarsinothiobenzoic acid, and dimethylarsinoglutathione as treatments for cancer)

L8 ANSWER 4 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:377088 CAPLUS
DN 138:380384
TI Method and device for detecting and monitoring alcoholism and related diseases using microarrays
IN Harris, Adron; Mayfield, Dayne R.; Lewohl, Jo; Dodd, Peter R.
PA University of Texas System, USA

SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003040414	A1	20030515	WO 2002-US35902	20021108

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2003104457	A1	20030605	US 2002-291247	20021107
PRAI US 2001-338270P	P	20011108		

AB A device and method for detecting, diagnosing, and or monitoring alcoholism and related disease states is disclosed. The device includes a substrate and one or more alcoholism-specific nucleic acids attached to the substrate. The substrate is contacted by a sample collected from a person with alcoholism or alc. abuse or an alc. related disease state, wherein contact occurs under pre-selected binding conditions that provides information that can be collected and recorded by a computer.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Proteins
RL: ANT (Analyte); BSU (Biological study, unclassified); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(reticulon 1, **neuroblastoma** (nerve tissue) protein; method and device for detecting and monitoring alcoholism and related diseases using microarrays)

IT 1303-00-0, Gallium **arsenide**, biological studies 7440-21-3, Silicon, biological studies 7440-22-4, Silver, biological studies 7440-55-3, Gallium, biological studies 7440-56-4, Germanium, biological studies 7440-57-5, Gold, biological studies 9002-84-0, PTFE 9003-53-6, Polystyrene 22569-72-8, **Arsenide**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(device substrate component; method and device for detecting and monitoring alcoholism and related diseases using microarrays)

L8 ANSWER 5 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2003183636 EMBASE
TI Induction of autophagic cell death in malignant glioma cells by **arsenic** trioxide.
AU Kanzawa T.; Kondo Y.; Ito H.; Kondo S.; Germano I.
CS I. Germano, Department of Neurosurgery, Mount Sinai Medical Center, One Gustave L. Levy Place, New York, NY 10029-6574, United States. isabelle.germano@msnyuhealth.org
SO Cancer Research, (1 May 2003) 63/9 (2103-2108).
Refs: 36
ISSN: 0008-5472 CODEN: CNREA8
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
016 Cancer
030 Pharmacology
037 Drug Literature Index
LA English
SL English

AB Recent clinical data shows that **arsenic** trioxide (As(2)O(3)) causes remission in patients with acute promyelocytic leukemia and multiple myeloma without severe side effects. Laboratory data suggest that As(2)O(3) induces apoptosis or cell differentiation of hematopoietic or solid tumor cells. To date, there has been no study on the effects of As(2)O(3) on glioma cells. In this study, we investigated the in vitro effect of As(2)O(3) on cell growth inhibition and cell death mechanisms in human glioma cells. As(2)O(3) significantly inhibited the proliferation of all six of the glioma cell lines (U373, U87, U251, GB1, A-172, and T98G) tested in this study in a dose-dependent manner. The IC(50) of As(2)O(3) for all of the tumor cell lines was <2 .mu.M. Previous studies have shown that this is a clinically safe concentration. Treatment with 2 .mu.M As(2)O(3) induced G(2)/M arrest in all of the glioma cell lines. Autophagy (programmed cell death type II), but not apoptosis (programmed cell death type I), was detected by electron microscopy in U-373-MG cells treated with 2 .mu.M As(2)O(3). Caspase inhibitors did not halt As(2)O(3)-induced cell death. Furthermore, combination of As(2)O(3) with bafilomycin A1 autophagy inhibitor enhanced the antitumor effect of As(2)O(3) through induction of apoptosis. These findings suggest that As(2)O(3) at a clinically safe concentration may be an effective chemotherapeutic agent for malignant gliomas.

TI Induction of autophagic cell death in malignant glioma cells by **arsenic** trioxide.

AB Recent clinical data shows that **arsenic** trioxide (As(2)O(3)) causes remission in patients with acute promyelocytic leukemia and multiple myeloma without severe side effects. Laboratory data suggest. . .

CT Medical Descriptors:
*cell death
*autophagy
***glioblastoma**
drug effect
in vitro study
cell growth
growth inhibition
cell proliferation
dose response
tumor cell line
glioma cell
drug safety
cell cycle G2 phase
apoptosis
electron microscopy
antineoplastic activity
human
controlled study
human cell
article
priority journal
***arsenic trioxide: PD, pharmacology**
bafilomycin A1: IT, drug interaction
caspase inhibitor

RN (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (bafilomycin A1) 88899-55-2

L8 ANSWER 6 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2003322649 EMBASE
TI Oral topotecan for refractory and relapsed **neuroblastoma**: A retrospective analysis.
AU Kramer K.; Kushner B.H.; Cheung N.-K.V.
CS Dr. K. Kramer, Department of Pediatrics, Mem. Sloan-Kettering Cancer Center, Box 429, 1275 York Avenue, New York, NY 10021, United States. kramerk@mskcc.org
SO Journal of Pediatric Hematology/Oncology, (2003) 25/8 (601-605).

Refs: 31
ISSN: 1077-4114 CODEN: JPHOFG
CY United States
DT Journal; Article
FS 007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
016 Cancer
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
SL English
AB Purpose: Among patients with multiply relapsed **neuroblastoma** refractory to conventional chemotherapy, oral topotecan has often been used for palliation. Although toxicity was generally thought to be mild, the efficacy of such an approach remains unproven. Methods: The authors retrospectively analyzed patients with multiply relapsed or refractory **neuroblastoma** who were treated with oral topotecan for palliation. Each course was generally 1 mg/m(2)/d in two divided doses, for 21 consecutive days, repeated after a 1-week rest in patients without symptoms of progressive disease. Disease status was assessed by radiographic studies, urine catecholamine levels, and multiple bone marrow aspirations and biopsies. Results: Twenty patients between the ages of 3 and 34 (median 13 years) received 1 (n = 7), 2 (n = 3), 3 (n = 4), 4 (n = 2), 6 (n = 2), and 12 courses (n = 2). Prior treatments included multiple cycles of high-dose alkylator-based chemotherapy (n = 20), high-dose intravenous topotecan (n = 8), myeloablative chemotherapy or radioimmunotherapy (n = 10), or experimental biologic agents (n = 16). Anti-**neuroblastoma** effects were seen in five patients lasting 6 to 12 months; two additional patients remained stable for 4 months. Thirteen patients had progressive disease (11 after one or two cycles). Toxicity included diarrhea (n = 12) requiring a dose adjustment in three patients and discontinuation of the drug in a fourth, and myelosuppression (n = 11) requiring transfusion and/or granulocyte-colony stimulating factor support. Conclusions: Oral topotecan therapy has antitumor activity in a small percentage of patients with relapsed or refractory **neuroblastoma**. Toxicities, including diarrhea and myelosuppression, may necessitate a dose adjustment in this patient population. Low-dose oral topotecan may have utility in the treatment of **neuroblastoma**.
TI Oral topotecan for refractory and relapsed **neuroblastoma**: A retrospective analysis.
AB Purpose: Among patients with multiply relapsed **neuroblastoma** refractory to conventional chemotherapy, oral topotecan has often been used for palliation. Although toxicity was generally thought to be mild, the efficacy of such an approach remains unproven. Methods: The authors retrospectively analyzed patients with multiply relapsed or refractory **neuroblastoma** who were treated with oral topotecan for palliation. Each course was generally 1 mg/m(2)/d in two divided doses, for 21. . . high-dose intravenous topotecan (n = 8), myeloablative chemotherapy or radioimmunotherapy (n = 10), or experimental biologic agents (n = 16). Anti-**neuroblastoma** effects were seen in five patients lasting 6 to 12 months; two additional patients remained stable for 4 months. Thirteen. . . stimulating factor support. Conclusions: Oral topotecan therapy has antitumor activity in a small percentage of patients with relapsed or refractory **neuroblastoma**. Toxicities, including diarrhea and myelosuppression, may necessitate a dose adjustment in this patient population. Low-dose oral topotecan may have utility in the treatment of **neuroblastoma**.
CT Medical Descriptors:
***neuroblastoma: DT, drug therapy**
***neuroblastoma: RT, radiotherapy**
*cancer recurrence
cancer palliative therapy
side effect: SI, side effect

catecholamine blood level
disease activity
bone marrow biopsy
drug effect
cancer radiotherapy
diarrhea: SI, side effect
dose response
bone. . .
drug combination
thiotepa: DT, drug therapy
carboplatin: CB, drug combination
carboplatin: DT, drug therapy
etoposide: CB, drug combination
etoposide: DT, drug therapy
etoposide: PO, oral drug administration
arsenic: CB, drug combination
arsenic: DT, drug therapy
arylbutyric acid derivative: CB, drug combination
arylbutyric acid derivative: DT, drug therapy
antiidiotypic antibody: CB, drug combination
antiidiotypic antibody: DT, drug. . .

RN (topotecan) 119413-54-6, 123948-87-8; (cyclophosphamide) 50-18-0; (doxorubicin) 23214-92-8, 25316-40-9; (vincristine) 57-22-7; (rebeccamycin) 93908-02-2; (thiotepa) 52-24-4; (carboplatin) 41575-94-4; (etoposide) 33419-42-0; (**arsenic**) 7440-38-2

L8 ANSWER 7 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2003188991 EMBASE
TI [Symphony for camptothecins].
SYMPHONIE POUR CAMPTOTHECINES.
AU Lansiaux A.; Bailly C.
CS A. Lansiaux, Lab. de Pharmacologie Antitumorale, Centre Oscar-Lambret, Unite 524 Inserm, place de Verdun, 59045 Lille, France
SO Bulletin du Cancer, (1 Mar 2003) 90/3 (239-245).
Refs: 52
ISSN: 0007-4551 CODEN: BUCABS
CY France
DT Journal; General Review
FS 016 Cancer
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
039 Pharmacy
LA French
SL English; French
AB Cancer occurs and it is life that runs off the rails. To restore the melody, the oncologist can use an array of pharmacological instruments which he needs to tune optimally to reach the maximal efficacy. Camptothecin derivatives, inhibitors of topoisomerase I, represent an essential family of the chemotherapeutic **arsenal**. Topotecan and irinotecan have been used in the clinic for a number of years, but other potent analogues are appearing and broaden the range of topoisomerase I poisons. In this review, we present the main molecular characteristics of the second generation of camptothecins (lurtotecan, exatecan, rubitecan, silatecan). The future is also evoked with camptothecin derivatives bearing a modified lactone ring, in particular the homocamptothecins and the drug diflomotecan, which shows promise as an anticancer. The camptothecin partition is disclosed here.
AB . . . tune optimally to reach the maximal efficacy. Camptothecin derivatives, inhibitors of topoisomerase I, represent an essential family of the chemotherapeutic **arsenal**. Topotecan and irinotecan have been used in the clinic for a number of years, but other potent analogues are appearing. . .
CT Medical Descriptors:

*cancer . . . drug therapy
colorectal cancer: DT, drug therapy
ovary cancer: DT, drug therapy
lung non small cell cancer: DT, drug therapy
peritoneum cancer: DT, drug therapy
glioblastoma: DT, drug therapy
bone marrow toxicity: SI, side effect
neutropenia: SI, side effect
thrombocytopenia: SI, side effect
gastrointestinal toxicity: SI, side effect
diarrhea: SI, side. . .

L8 ANSWER 8 OF 123 MEDLINE on STN
AN 2003026521 MEDLINE
DN 22368107 PubMed ID: 12480548
TI **Arsenic** trioxide inhibits the growth of A498 renal cell carcinoma cells via cell cycle arrest or apoptosis.
AU Hyun Park Woo; Hee Cho Yeon; Won Jung Chul; Oh Park Joon; Kim Kihyun; Hyuck Im Young; Lee Mark H; Ki Kang Won; Park Keunchil
CS Division of Hematology/Oncology, Department of Medicine, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, South Korea.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2003 Jan 3) 300 (1) 230-5.
Journal code: 0372516. ISSN: 0006-291X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200302
ED Entered STN: 20030122
Last Updated on STN: 20030214
Entered Medline: 20030213
AB Previously, we showed that **arsenic** trioxide potently inhibited the growth of myeloma cells and head and neck cancer cells. Here, we demonstrate that **arsenic** trioxide inhibited the proliferation of all the renal cell carcinoma cell lines (ACHN, A498, Caki-2, Cos-7, and Renca) except only one cell line (Caki-1) with IC(50) of about 2.5-10 microM. **Arsenic** trioxide induced a G(1) or a G(2)-M phase arrest in these cells. When we examined the effects of this drug on A498 cells, **arsenic** trioxide (2.5 microM) decreased the levels of CDK2, CDK6, cyclin D1, cyclin E, and cyclin A proteins. Although p21 protein was not increased by **arsenic** trioxide, this drug markedly enhanced the binding of p21 with CDK2. In addition, the activities of CDK2- and CDK6-associated kinase were reduced in association with hypophosphorylation of Rb protein. **Arsenic** trioxide (10 microM) also induced apoptosis in A498 cells. Apoptotic process of A498 cells was associated with the changes of Bcl-(XL), caspase-9, caspase-3, and caspase-7 proteins as well as mitochondria transmembrane potential (Deltapsi(m)) loss. Taken together, these results demonstrate that **arsenic** trioxide inhibits the growth of renal cell carcinoma cells via cell cycle arrest or apoptosis.
TI **Arsenic** trioxide inhibits the growth of A498 renal cell carcinoma cells via cell cycle arrest or apoptosis.
AB Previously, we showed that **arsenic** trioxide potently inhibited the growth of myeloma cells and head and neck cancer cells. Here, we demonstrate that **arsenic** trioxide inhibited the proliferation of all the renal cell carcinoma cell lines (ACHN, A498, Caki-2, Cos-7, and Renca) except only one cell line (Caki-1) with IC(50) of about 2.5-10 microM. **Arsenic** trioxide induced a G(1) or a G(2)-M phase arrest in these cells. When we examined the effects of this drug on A498 cells, **arsenic** trioxide (2.5 microM) decreased the levels of CDK2, CDK6, cyclin D1, cyclin E, and cyclin A proteins. Although p21 protein was not increased by **arsenic** trioxide, this drug markedly enhanced the binding of p21 with CDK2. In addition, the

activities of CDK2- and CDK6-associated kinase were reduced in association with hypophosphorylation of Rb protein. **Arsenic** trioxide (10 microM) also induced apoptosis in A498 cells. Apoptotic process of A498 cells was associated with the changes of. . . Bcl-(XL), caspase-9, caspase-3, and caspase-7 proteins as well as mitochondria transmembrane potential (Deltapsi(m)) loss. Taken together, these results demonstrate that **arsenic** trioxide inhibits the growth of renal cell carcinoma cells via cell cycle arrest or apoptosis.

CT Check Tags: Animal; Human
Apoptosis: DE, drug effects
***Arsenicals: PD, pharmacology**
*Carcinoma, Renal Cell: DT, drug therapy
Carcinoma, Renal Cell: ME, metabolism
Carcinoma, Renal Cell: PA, pathology
Caspases: ME,. . . Kidney Neoplasms: ME, metabolism
Kidney Neoplasms: PA, pathology
*Oxides: PD, pharmacology
Protein-Serine-Threonine Kinases: ME, metabolism
Proto-Oncogene Proteins c-bcl-2: ME, metabolism
Retinoblastoma Protein: ME, metabolism
Tumor Cells, Cultured

RN **1327-53-3 (arsenic trioxide)**; 136601-57-5 (Cyclin D1)

CN 0 (**Arsenicals**); 0 (Cip1 protein); 0 (Cyclin A); 0 (Cyclin E); 0 (Cyclins); 0 (Oxides); 0 (Proto-Oncogene Proteins c-bcl-2); 0 (**Retinoblastoma** Protein); 0 (bcl-x protein); EC 2.7.1.- (CDK2 protein); EC 2.7.1.37 (CDK6 protein); EC 2.7.1.37 (Cyclin-Dependent Kinases); EC 2.7.1.37 (Protein-Serine-Threonine Kinases);. . .

L8 ANSWER 9 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 2003217691 EMBASE

TI Inorganics and hormesis.

AU Calabrese E.J.; Baldwin L.A.

CS Dr. E.J. Calabrese, Dept. of Environ. Health Sciences, N344 Morrill Science Center, University of Massachusetts, Amherst, MA 01003, United States. edwardc@schoolph.umass.edu

SO Critical Reviews in Toxicology, (2003) 33/3-4 (215-304).
Refs: 303
ISSN: 1040-8444 CODEN: CRTXB2

CY United States

DT Journal; General Review

FS 046 Environmental Health and Pollution Control
052 Toxicology

LA English

SL English

AB The article is a comprehensive review of the occurrence of hormetic dose-response relationships induced by inorganic agents, including toxic agents, of significant environmental and public health interest (e.g., **arsenic**, cadmium, lead, mercury, selenium, and zinc). Hormetic responses occurred in a wide range of biological models (i.e., plants, invertebrate and vertebrate animals) for a large and diverse array of endpoints. Particular attention was given to providing an assessment of the quantitative features of the dose-response relationships and underlying mechanisms that could account for the biphasic nature of the hormetic response. These findings indicate that hormetic responses commonly occur in appropriately designed experiments and are highly generalizeable with respect to biological model responses. The hormetic dose response should be seen as a reliable feature of the dose response for inorganic agents and will have an important impact on the estimated effects of such agents on environmental and human receptors.

AB . . . occurrence of hormetic dose-response relationships induced by inorganic agents, including toxic agents, of significant environmental and public health interest (e.g., **arsenic**, cadmium, lead, mercury, selenium, and zinc). Hormetic responses occurred in a wide range of biological models (i.e., plants, invertebrate and. . .

CT Medical Descriptors:
*hormesis
risk assessment
dose response
enzyme activity
neurotoxicity
linear system
DNA damage
fungus growth
cell survival
embryo development
neuroblastoma cell
nonhuman
review
*inorganic compound
heavy metal
arsenic
cadmium
lead
mercury
selenium
zinc
iodine
disinfectant agent
tributyltin
acetylcholinesterase

RN (**arsenic**) 7440-38-2; (cadmium) 22537-48-0, 7440-43-9; (lead) 7439-92-1; (mercury) 14302-87-5, 7439-97-6; (selenium) 7782-49-2; (zinc) 7440-66-6; (iodine) 7553-56-2; (tributyltin) 688-73-3; (acetylcholinesterase) 9000-81-1

L8 ANSWER 10 OF 123 MEDLINE on STN DUPLICATE 3
AN 2003298142 MEDLINE
DN 22709700 PubMed ID: 12825820
TI In vitro growth suppression of human glioma cells by a 16-mer oligopeptide: a potential new treatment modality for malignant glioma.
AU Kono Katsuhiko; Ueba Tetsuya; Takahashi Jun A; Murai Nozomu; Hashimoto Nobuo; Myoumoto Akira; Itoh Nobuo; Fukumoto Manabu
CS Department of Neurosurgery, Graduate School of Medicine, Kyoto University, Sakyoku, Kyoto, Japan.
SO JOURNAL OF NEURO-ONCOLOGY, (2003 Jun) 63 (2) 163-71.
Journal code: 8309335. ISSN: 0167-594X.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200308
ED Entered STN: 20030627
Last Updated on STN: 20030802
Entered Medline: 20030801
AB Fibroblast growth factor-2 (FGF-2) is involved as an autocrine growth factor in the autonomous proliferation of glioma cells. To develop a new strategy for treating patients with glioma, we studied the effect on human glioma cells of a 16-mer oligopeptide with conformational similarity to the putative receptor-binding domain of FGF-2. A synthesized oligonucleotide was assessed its receptor-binding activity by BIAcore instrument. Its biological effect on glioma cell lines was examined in vitro by MTT assay. The peptide suppressed the in vitro growth of human glioma cells U87MG, T98G and U251MG cells, but not of A431 cells whose growth is not dependent on FGF-2. Apoptotic bodies were noted after 24-h incubation in the presence of the peptide; Ac-YVAD-CHO, a caspase-3 inhibitor, suppressed apoptosis. Furthermore, we examined the modulation of the cytotoxic effect of anticancer drugs by the oligopeptide. The addition of this oligopeptide to the chemotherapeutic agents CDDP, ACNU

and VP16 had additive effects in vitro. These results suggest that the pathway of the FGF-2 autocrine loop through the FGF receptor plays an important role in the proliferation of glioma cells. New drugs targeting this loop may be highly effective in treating FGF-2-dependent tumors. Our results suggest that its addition to the therapeutic **arsenal** may lead to improved treatment regimens for patients with FGF-2-dependent tumors.

AB . . . targeting this loop may be highly effective in treating FGF-2-dependent tumors. Our results suggest that its addition to the therapeutic **arsenal** may lead to improved treatment regimens for patients with FGF-2-dependent tumors.

CT Check Tags: Human; Support, Non-U.S. Gov't
Antineoplastic Agents: TU, therapeutic use
Apoptosis: DE, drug effects
***Brain Neoplasms: DT, drug therapy**
Cell Division: DE, drug effects
Cisplatin: TU, therapeutic use
Drug Synergism
Etoposide: TU, therapeutic use
*Fibroblast. . .

L8 ANSWER 11 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2003047943 EMBASE
TI **Brain cancer** in a residential area bordering on an oil refinery: Editorial.
AU Roman G.C.
SO Neuroepidemiology, (2003) 22/1 (56).
ISSN: 0251-5350 CODEN: NEEPD3
CY Switzerland
DT Journal; Editorial
FS 006 Internal Medicine
008 Neurology and Neurosurgery
016 Cancer
046 Environmental Health and Pollution Control
052 Toxicology
LA English
TI **Brain cancer** in a residential area bordering on an oil refinery: Editorial.
CT Medical Descriptors:
*medical literature
publication
environmental exposure
brain cancer
occupational exposure
glioma
ionizing radiation
radiation exposure
benign tumor
case control study
population research
cancer risk
human
editorial
hexane: TO, drug toxicity
petroleum: TO, drug toxicity
arsenic: TO, drug toxicity
mercury: TO, drug toxicity
RN (hexane) 110-54-3; (petroleum) 8002-05-9; (**arsenic**) 7440-38-2; (mercury) 14302-87-5, 7439-97-6

L8 ANSWER 12 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:946131 CAPLUS
DN 138:1774
TI Cytotoxic or radioactive conjugates able to bind to oxytocin receptors

IN Bussolati, Giovanni; Cassoni, Paola; Chini, Bice
PA Italy
SO PCT Int. Appl., 14 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002098447	A1	20021212	WO 2002-EP5687	20020524

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI IT 2001-MI1167 A 20010601

AB Conjugates of oxytocin (OT) or OT-analogs with cytotoxic or radioactive agents, useful for the therapy or imaging of oxytocin-receptors (OTR) expressing tumors, more particularly conjugates of OT-analogs with chelating agents binding radioactive or paramagnetic metals or with cytotoxic agents such as taxol (paclitaxel) are described.. Receptor binding, tumor uptake and biodistribution studies of 111In-DOTA conjugates with lysine-vasotocin or desaminolysine-vasotocin are presented.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Neuroglia, neoplasm
(**glioblastoma**; radiolabeled oxytocin conjugates for tumor diagnosis and therapy)

IT 50-56-6D, Oxytocin, radiolabeled conjugates of analogs 58-85-5D, Biotin, conjugates with oxytocin analogs 10043-66-0D, Iodine 131, conjugates of oxytocin analogs labeled with, biological studies 10098-91-6D, Yttrium 90, conjugates of oxytocin analogs labeled with, biological studies 13967-65-2D, Holmium 166, conjugates of oxytocin analogs labeled with, biological studies 13981-25-4D, Copper 64, conjugates of oxytocin analogs labeled with, biological studies 13981-28-7D, Lanthanum 140, conjugates of oxytocin analogs labeled with, biological studies 14041-42-0D, Gadolinium 159, conjugates of oxytocin analogs labeled with, biological studies 14041-44-2D, Ytterbium 175, conjugates of oxytocin analogs labeled with, biological studies 14093-04-0D, Iron 52, conjugates of oxytocin analogs labeled with, biological studies 14119-09-6D, Gallium 67, conjugates of oxytocin analogs labeled with, biological studies 14158-31-7D, Iodine 125, conjugates of oxytocin analogs labeled with, biological studies 14191-64-1D, Praseodymium 142, conjugates of oxytocin analogs labeled with, biological studies 14265-75-9D, Lutetium 177, conjugates of oxytocin analogs labeled with, biological studies 14276-53-0D, Copper 62, conjugates of oxytocin analogs labeled with, biological studies 14378-26-8D, Rhenium 188, conjugates of oxytocin analogs labeled with, biological studies 14391-11-8D, Gold 199, conjugates of oxytocin analogs labeled with, biological studies 14391-19-6D, Terbium 161, conjugates of oxytocin analogs labeled with, biological studies 14391-96-9D, Scandium 47, conjugates of oxytocin analogs labeled with, biological studies 14392-02-0D, Chromium 51, conjugates of oxytocin analogs labeled with, biological studies 14686-69-2D, Bromine 82, conjugates of oxytocin analogs labeled with, biological studies 14687-25-3D, Lead 203, conjugates of oxytocin analogs labeled with, biological studies 14809-47-3D, Bromine 75, conjugates of oxytocin analogs labeled with, biological studies 14885-78-0D, Indium 113, conjugates of oxytocin analogs labeled with, biological studies 14913-49-6D, Bismuth 212,

conjugates of oxytocin analogs labeled with, biological studies 14998-63-1D, Rhenium 186, conjugates of oxytocin analogs labeled with, biological studies 15715-08-9D, Iodine 123, conjugates of oxytocin analogs labeled with, biological studies 15720-26-0D, Bromine 74, conjugates of oxytocin analogs labeled with, biological studies 15750-15-9D, Indium 111, conjugates of oxytocin analogs labeled with, biological studies 15755-33-6D, **Arsenic** 72, conjugates of oxytocin analogs labeled with, biological studies 15757-14-9D, Gallium 68, conjugates of oxytocin analogs labeled with, biological studies 15757-86-5D, Copper 67, conjugates of oxytocin analogs labeled with, biological studies 15758-35-7D, Ruthenium 97, conjugates of oxytocin analogs labeled with, biological studies 15760-04-0D, Silver 111, conjugates of oxytocin analogs labeled with, biological studies 15765-31-8D, Promethium 149, conjugates of oxytocin analogs labeled with, biological studies 15765-38-5D, Bromine 76, conjugates of oxytocin analogs labeled with, biological studies 15765-39-6D, Bromine 77, conjugates of oxytocin analogs labeled with, biological studies 15766-00-4D, Samarium 153, conjugates of oxytocin analogs labeled with, biological studies 33069-62-4D, Paclitaxel, conjugates with oxytocin analogs 104162-48-3D, DOTMA, radiolabeled conjugates with oxytocin analogs 113786-33-7D, BOPTA, radiolabeled conjugates with oxytocin analogs 133081-24-0D, radiolabeled conjugates with oxytocin analogs
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(radiolabeled oxytocin conjugates for tumor diagnosis and therapy)

L8 ANSWER 13 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:869083 CAPLUS
DN 137:381501
TI Protein-protein interaction domains of adipocyte proteins and method for screening for association-inhibiting drugs
IN Legrain, Pierre; Whiteside, Simon; Mao, Jen-I.; Khrebtukova, Irina; Luo, Shujun
PA Hybrigenics, Fr.; Lynx Therapeutics Inc.
SO PCT Int. Appl., 232 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002090544	A2	20021114	WO 2002-EP6333	20020503

PI W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-288885P P 20010504
AB The present invention relates to protein-protein interactions of adipocytes. More specifically, the present invention relates to complexes of polypeptides, or polynucleotides encoding the polypeptides, interaction domains of the polypeptides, methods for screening drugs which modulate the interaction of proteins, and pharmaceutical compns. that are capable of modulating the protein-protein interactions. Thus, gene expression profiles of differentiated and undifferentiated human PAZ6 cells indicated that genes for the following proteins were overexpressed in the differentiated cells (adipocytes): protein TPT1 (tumor protein, translationally controlled, 1), leptin, complement component 1, thymosin .beta.4, fibulin 1C, osteonectin, .beta.2-microglobulin, proteasome

subunit p31, huntingtin-interacting protein 2, and two interferon-inducible proteins. In a modified yeast two-hybrid system, the protein interaction domains of these proteins were used as bait to identify proteins with which they interact. The DVL1, DVL2, and DVL3 (dishevelled 1, 2 and 3) proteins of the Wnt signaling pathway were all found to interact with the PSMD8 protein, i.e., proteasome subunit p31.

IT Antigens
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(MGEA5 (**meningioma** expressed antigen 5); protein-protein interaction domains of adipocyte proteins and method for screening for assocn.-inhibiting drugs)

IT Proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(RAP140 (**retinoblastoma**-assocd. protein 140); protein-protein interaction domains of adipocyte proteins and method for screening for assocn.-inhibiting drugs)

IT Transport proteins
RL: ARG (Analytical reagent use); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(**arsenite**-transporting, gene ASNA1; protein-protein interaction domains of adipocyte proteins and method for screening for assocn.-inhibiting drugs)

L8 ANSWER 14 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:405736 CAPLUS
DN 136:397946
TI Neuropeptide Y1 receptor binding compounds in the treatment and diagnosis of cancer
IN Reubi, Jean Claude
PA Mallinckrodt Inc., USA
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1208852	A1	20020529	EP 2000-204183	20001124
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	WO 2002043776	A2	20020606	WO 2001-EP13621	20011121
	WO 2002043776	A3	20021010		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2002020723	A5	20020611	AU 2002-20723	20011121
PRAI	EP 2000-204183	A	20001124		
	WO 2001-EP13621	W	20011121		

AB The present invention relates to the use of compds. that bind the neuropeptide Y1 (NPY1) receptor for the prepn. of a pharmaceutical compn. for the diagnosis or treatment of tumors expressing NPY1 receptors, in particular breast cancer, ovarian cancer and **glioblastoma**. The invention also relates to the pharmaceutical compns. that contain such

compds. Examples are provided demonstrating the presence and d. of Y1 and Y2 receptors in human breast tissue and breast carcinoma using 125I-labeled PYY and [Leu31,Pro34]-PYY.

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB The present invention relates to the use of compds. that bind the neuropeptide Y1 (NPY1) receptor for the prepn. of a pharmaceutical compn. for the diagnosis or treatment of tumors expressing NPY1 receptors, in particular breast cancer, ovarian cancer and **glioblastoma**. The invention also relates to the pharmaceutical compns. that contain such compds. Examples are provided demonstrating the presence and d. of Y1 and Y2 receptors in human breast tissue and breast carcinoma using 125I-labeled PYY and [Leu31,Pro34]-PYY.

IT Neuroglia
(**glioblastoma**, inhibitors; neuropeptide Y1 receptor binding compds. in treatment and diagnosis of cancer)

IT Antitumor agents
(**glioblastoma**; neuropeptide Y1 receptor binding compds. in treatment and diagnosis of cancer)

IT 7429-91-6D, Dysprosium, compds. 7439-89-6D, Iron, compds. 7439-96-5D, Manganese, compds. 7440-00-8D, Neodymium, compds. 7440-02-0D, Nickel, compds. 7440-10-0D, Praseodymium, compds. 7440-19-9D, Samarium, compds. 7440-27-9D, Terbium, compds. 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds. 7440-50-8D, Copper, compds. 7440-52-0D, Erbium, compds. 7440-54-2D, Gadolinium, compds. 7440-60-0D, Holmium, compds. 7440-64-4D, Ytterbium, compds. 13981-25-4D, Copper 64, compds., biological studies 14093-04-0D, Iron 52, compds., biological studies 14119-09-6D, Gallium 67, compds., biological studies 14276-53-0D, Copper 62, compds., biological studies 14392-02-0D, Chromium 51, compds., biological studies 14687-25-3D, Lead 203, compds., biological studies 15715-08-9D, Iodine 123, compds., biological studies 15750-15-9D, Indium 111, compds., biological studies 15755-33-6D, **Arsenic** 72, compds., biological studies 15757-14-9D, Gallium 68, compds., biological studies 15758-35-7D, Ruthenium 97, compds., biological studies
RL: DGN (Diagnostic use); BIOL (Biological study); USES (Uses)
(neuropeptide Y1 receptor binding compds. in treatment and diagnosis of cancer)

IT 10043-49-9D, Gold 198, compds., biological studies 10043-66-0D, Iodine 131, compds., biological studies 10098-91-6D, Yttrium 90, compds., biological studies 13967-64-1D, Dysprosium 165, compds., biological studies 13967-65-2D, Holmium 166, compds., biological studies 13981-49-2D, Tellurium 127, compds., biological studies 14041-42-0D, Gadolinium 159, compds., biological studies 14041-44-2D, Ytterbium 175, compds., biological studies 14119-08-5D, Gallium 66, compds., biological studies 14158-30-6D, Iodine 124, compds., biological studies 14191-64-1D, Praseodymium 142, compds., biological studies 14269-78-4D, Ytterbium 169, compds., biological studies 14378-26-8D, Rhenium 188, compds., biological studies 14391-11-8D, Gold 199, compds., biological studies 14391-19-6D, Terbium 161, compds., biological studies 14391-32-3D, Gadolinium 157, compds., biological studies 14683-06-8D, Tin 121, compds., biological studies 14687-61-7D, **Arsenic** 77, compds., biological studies 14913-89-4D, compds., biological studies 14981-64-7D, Palladium 109, compds., biological studies 14981-79-4D, Praseodymium 143, compds., biological studies 14998-63-1D, Rhenium 186, compds., biological studies 15065-93-7D, Terbium 149, compds., biological studies 15720-75-9D, Thulium 172, compds., biological studies 15757-86-5D, Copper 67, compds., biological studies 15760-04-0D, Silver 111, compds., biological studies 15765-31-8D, Promethium 149, compds., biological studies 15766-00-4D, Samarium 153, compds., biological studies 15766-03-7D, Promethium 151, compds., biological studies 15840-13-8D, Erbium 169, compds., biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(neuropeptide Y1 receptor binding compds. in treatment and diagnosis of

cancer)

L8 ANSWER 15 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:729666 CAPLUS
DN 137:374107
TI National emission standards for hazardous air pollutants for primary copper smelting
CS Environmental Protection Agency (EPA), USA
SO Federal Register (2002), 67(113), 40477-40506, 12 Jun 2002
CODEN: FEREAC; ISSN: 0097-6326
PB Superintendent of Documents
DT Journal
LA English
AB This USEPA action promulgates national emission stds. for hazardous air pollutants (NESHAP) for primary Cu smelting. Primary Cu smelters can potentially emit significant amts. of certain toxic metals listed as hazardous air pollutants (HAP) in the Clean Air Act (CAA) Section 112(b)(1). These metals include Sb, As, Be, Cd, Co, Pb, Mn, Ni, and Se. Exposure to these substances has been demonstrated to cause adverse health effects, including diseases of the lung, kidney, **central nervous system**, and **cancer**. This final rule establishes emissions limitations and work practice stds. for primary Cu smelters that are, or are part of, a major source of HAP emissions and which use batch Cu converters. These stds. reflect application of the max. achievable control technol. (MACT). When fully implemented, EPA ests. the rule will reduce annual nationwide HAP emissions from this source category by .apprx.23% or 22 Mg/yr.
AB This USEPA action promulgates national emission stds. for hazardous air pollutants (NESHAP) for primary Cu smelting. Primary Cu smelters can potentially emit significant amts. of certain toxic metals listed as hazardous air pollutants (HAP) in the Clean Air Act (CAA) Section 112(b)(1). These metals include Sb, As, Be, Cd, Co, Pb, Mn, Ni, and Se. Exposure to these substances has been demonstrated to cause adverse health effects, including diseases of the lung, kidney, **central nervous system**, and **cancer**. This final rule establishes emissions limitations and work practice stds. for primary Cu smelters that are, or are part of, a major source of HAP emissions and which use batch Cu converters. These stds. reflect application of the max. achievable control technol. (MACT). When fully implemented, EPA ests. the rule will reduce annual nationwide HAP emissions from this source category by .apprx.23% or 22 Mg/yr.
IT 7439-92-1, Lead, processes 7439-96-5, Manganese, processes 7440-02-0, Nickel, processes 7440-36-0, Antimony, processes 7440-38-2, **Arsenic**, processes 7440-41-7, Beryllium, processes 7440-43-9, Cadmium, processes 7440-48-4, Cobalt, processes 7782-49-2, Selenium, processes
RL: POL (Pollutant); REM (Removal or disposal); OCCU (Occurrence); PROC (Process)
(hazardous air pollutant national emission stds. for primary copper smelting source category, USA)

L8 ANSWER 16 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002248671 EMBASE
TI Apoptosis: Target of cancer therapy.
AU Ferreira C.G.; Epping M.; Kruyt F.A.E.; Giaccone G.
CS G. Giaccone, Department of Medical Oncology, Vrije Universiteit Medical Center, 1117 De Boelelaan, HV 1081 Amsterdam, Netherlands. G.Giaccone@vumc.nl
SO Clinical Cancer Research, (2002) 8/7 (2024-2034).
Refs: 173
ISSN: 1078-0432 CODEN: CCREF4
CY United States
DT Journal; (Short Survey)
FS 016 Cancer

037 Drug Literature Index
LA English
SL English
AB Recent knowledge on apoptosis has made it possible to devise novel approaches, which exploit this process to treat cancer. In this review, we discuss in detail approaches to induce tumor cell apoptosis, their mechanism of action, stage of development, and possible drawbacks. Finally, the obstacles yet to be overcome and the perspectives for potential clinical use of apoptosis-triggering approaches in cancer therapy in the future are assessed.
CT Medical Descriptors:
*apoptosis
*cancer . . .
methyl 1 [[1 oxo 3 phenyl 2 [(pyrazinylcarbonyl)amino]propyl]amino]butyl]boronic acid
flavopiridol
tumor necrosis factor related apoptosis inducing ligand
apoptin
caspase
protein Bax
protein bcl 2
protein bcl x
protein p53
retinoblastoma protein
phosphatidylinositol 3 kinase
Ras protein
BCR ABL protein
immunoglobulin enhancer binding protein
proteasome inhibitor
lonidamine
arsenic trioxide
inhibitor of apoptosis protein
protein kinase B
cyclin dependent kinase inhibitor
RN. . . [(pyrazinylcarbonyl)amino]propyl]amino]butyl]boronic acid) 179324-69-7, 197730-97-5; (flavopiridol) 146426-40-6; (apoptin) 264888-91-7; (caspase) 186322-81-6; (protein bcl 2) 219306-68-0; (phosphatidylinositol 3 kinase) 115926-52-8; (lonidamine) 50264-69-2; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (protein kinase B) 148640-14-6

L8 ANSWER 17 OF 123 MEDLINE on STN
AN 2002691977 MEDLINE
DN 22340534 PubMed ID: 12452754
TI CNS relapses of acute promyelocytic leukemia after all-trans retinoic acid.
AU Burry Lisa D; Seki Jack T
CS Mt. Sinai Hospital, University of Toronto, Ontario, Canada.
SO ANNALS OF PHARMACOTHERAPY, (2002 Dec) 36 (12) 1900-6. Ref: 66
Journal code: 9203131. ISSN: 1060-0280.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW OF REPORTED CASES)
LA English
FS Priority Journals
EM 200305
ED Entered STN: 20021214
Last Updated on STN: 20030514
Entered Medline: 20030513
AB OBJECTIVE: To review the role of all-trans retinoic acid (ATRA) and **arsenic** trioxide in central nervous system (CNS) relapses of acute promyelocytic leukemia (APL). CASE SUMMARY: A 69-year-old white man diagnosed with APL presented with bleeding diathesis. His molecular and

cytogenetic studies were positive for promyelocytic leukemia-retinoic acid receptoralpha (PML-RARalpha) and t(15;17) transformation. Complete molecular and cytogenetic remission was achieved with ATRA, daunorubicin, and cytarabine. Within 6 months, the patient was readmitted for investigation of severe global headaches and an ataxic gait. His peripheral blood and cerebral spinal fluid were positive for PML-RARalpha fusion protein. Intrathecal chemotherapy and radiation, as well as ATRA, were the main treatment modalities provided. Molecular and cytogenetic remission was again obtained. Three months later, a second relapse occurred in the CNS and the peripheral blood. DISCUSSION: APL is typically treated with anthacycline-based chemotherapy and ATRA. Approximately 85-95% of patients achieve complete remission (CR); however, the relapse rate has been reported to be about 30-40%. A thorough literature search (MEDLINE, EMBASE, CANCERLIT, 1966-January 2002) revealed only 54 cases of extramedullary disease, of which 35 involved the CNS. CONCLUSIONS: The introduction of ATRA has improved patient survival dramatically. APL relapse, in general, has been in part attributable to repetitive or prolonged exposure to ATRA and the possibility of additional chromosomal changes, making the disease more refractory to treat. Given the evidence, one could argue that, with repeated ATRA treatment, CR duration may be shortened. However, limited data are available to guide the appropriate management of APL relapsed to the CNS with either ATRA, chemotherapy, or **arsenic** trioxide. In our opinion, treatment using **arsenic** trioxide is an unconventional option worthy of exploring.

AB OBJECTIVE: To review the role of all-trans retinoic acid (ATRA) and **arsenic** trioxide in central nervous system (CNS) relapses of acute promyelocytic leukemia (APL). CASE SUMMARY: A 69-year-old white man diagnosed with. . . limited data are available to guide the appropriate management of APL relapsed to the CNS with either ATRA, chemotherapy, or **arsenic** trioxide. In our opinion, treatment using **arsenic** trioxide is an unconventional option worthy of exploring.

CT Check Tags: Case Report; Human; Male
Aged
*Antineoplastic Agents: AE, adverse effects
*Antineoplastic Agents: TU, therapeutic use
***Central Nervous System Neoplasms: DT, drug therapy**
Fatal Outcome
*Leukemia, Promyelocytic, Acute: DT, drug therapy
*Recurrence
Treatment Outcome
*Tretinoin: AE, adverse. . .

L8 ANSWER 18 OF 123 MEDLINE on STN
AN 2002353769 MEDLINE
DN 22030141 PubMed ID: 12034367
TI Involvement of microtubules and mitochondria in the antagonism of **arsenic** trioxide on paclitaxel-induced apoptosis.
AU Carre Manon; Carles Gerard; Andre Nicolas; Douillard Soazig; Ciccolini Joseph; Briand Claudette; Braguer Diane
CS UMR CNRS 6032, Faculty of Pharmacy, University of La Mediterranee, 27 Boulevard Jean Moulin, 13005 Marseille, France.
SO BIOCHEMICAL PHARMACOLOGY, (2002 May 15) 63 (10) 1831-42.
Journal code: 0101032. ISSN: 0006-2952.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200207
ED Entered STN: 20020707
Last Updated on STN: 20020713
Entered Medline: 20020712

AB **Arsenic** trioxide (As(2)O(3)) at low concentrations (1-10 microM) is effective in the treatment of acute promyelocytic leukemia (APL) and

lymphoma and is in clinical trials for treatment of solid tumors. Paclitaxel, an antimicrotubule agent, is highly efficacious in the treatment of adult tumors and is in clinical evaluation in childhood tumors. This study is the first to investigate the combination of **arsenic** and paclitaxel in the range of clinically achievable concentrations. We found that the simultaneous combination was antagonistic on proliferation of the **neuroblastoma** SK-N-SH cell line by using the combination index (CI) method. Moreover, a 40+/-5% decrease in paclitaxel-induced apoptosis in cells co-treated with As(2)O(3) confirmed the antagonism. The mechanism of antagonism was studied at the cellular level with 200 nM paclitaxel, twice the IC(50) value, and with 1 microM As(2)O(3) which administered singly did not affect cell survival or the microtubule network. As(2)O(3) antagonized the effects of paclitaxel on tubulin and microtubules. Paclitaxel-induced mitotic block was decreased by 20+/-2% and bundles induced by 200 nM paclitaxel were less condensed in the presence of 1 microM As(2)O(3). As(2)O(3) (10-200 microM) induced a concentration-dependent inhibition of tubulin polymerization in vitro which was maintained in presence of paclitaxel. Spectrophotometric and spectrofluorometric measurements indicated an interaction of As(2)O(3) with tubulin SH groups, without modification of the stoichiometry of paclitaxel binding to tubulin. Moreover, 4 microM As(2)O(3) inhibited the release of cytochrome c from isolated mitochondria by 78+/-10%. Our results show that As(2)O(3) and paclitaxel act antagonistically on mitochondria and microtubules and illustrate the need for careful evaluation of drug combinations.

TI Involvement of microtubules and mitochondria in the antagonism of **arsenic** trioxide on paclitaxel-induced apoptosis.

AB **Arsenic** trioxide (As(2)O(3)) at low concentrations (1-10 microM) is effective in the treatment of acute promyelocytic leukemia (APL) and lymphoma and. . . adult tumors and is in clinical evaluation in childhood tumors. This study is the first to investigate the combination of **arsenic** and paclitaxel in the range of clinically achievable concentrations. We found that the simultaneous combination was antagonistic on proliferation of the **neuroblastoma** SK-N-SH cell line by using the combination index (CI) method. Moreover, a 40+/-5% decrease in paclitaxel-induced apoptosis in cells co-treated. . .

CT Check Tags: Human; Support, Non-U.S. Gov't
*Antineoplastic Agents: PD, pharmacology
*Apoptosis: PH, physiology
Arsenicals: PD, pharmacology
Cell Division: DE, drug effects
Drug Antagonism
*Microtubules: DE, drug effects
Microtubules: ME, metabolism
*Mitochondria: DE, drug. . .

RN **1327-53-3 (arsenic trioxide)**; 33069-62-4 (Paclitaxel)

CN 0 (Antineoplastic Agents); 0 (**Arsenicals**); 0 (Oxides)

L8 ANSWER 19 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 2002255243 EMBASE

TI **Cancer** of the **brain** and nervous system and occupational exposures in finnish women.

AU Wesseling C.; Pukkala E.; Neuvonen K.; Kauppinen T.; Boffetta P.; Partanen T.

CS Dr. C. Wesseling, Ctrl. Amer. Inst. Toxic Substances, Universidad Nacional, PO Box 86, 3000 Heredia, Costa Rica

SO Journal of Occupational and Environmental Medicine, (2002) 44/7 (663-668). Refs: 39
ISSN: 1076-2752 CODEN: JOEMFM

CY United States

DT Journal; Article

FS 008 Neurology and Neurosurgery
016 Cancer
017 Public Health, Social Medicine and Epidemiology

035 Occupational Health and Industrial Medicine
LA English
SL English
AB Occupational agents were evaluated for the risk of **brain**-nervous system **cancer** in a cohort of 413,877 Finnish women with blue-collar occupations in 1970. Observed and expected numbers of incident cases and the intensities of exposure to 25 agents were generated for 183 job titles from 1971 to 1995. Poisson regression models linked incidence and exposure data. Increased risks were found for medium/high intensities of iron (standardized incidence ratio [SIR], 2.15; 95% confidence interval [CI], 0.96 to 4.80), oil mist (1.95; 0.97 to 3.90), any chromium compounds (1.51; 0.85 to 2.67), electromagnetic fields (1.37; 0.98 to 2.10), aliphatic and alicyclic hydrocarbon compounds (1.34; 0.80 to 2.27), lead (1.27; 0.81 to 2.01), cadmium (1.26; 0.72 to 2.22), and aromatic hydrocarbon compounds (1.20; 0.71 to 2.03). Strengths of the study include fair number of cases, virtually complete case coverage, and a high-quality job exposure matrix. Ecological design and cross-sectional job assessment introduced exposure misclassification and tended to drive risk estimates toward unity.
TI **Cancer** of the **brain** and nervous system and occupational exposures in finnish women.
AB Occupational agents were evaluated for the risk of **brain**-nervous system **cancer** in a cohort of 413,877 Finnish women with blue-collar occupations in 1970. Observed and expected numbers of incident cases and. . .
CT Medical Descriptors:
***brain cancer: EP, epidemiology**
*nervous system tumor: EP, epidemiology
Finland
occupational exposure
cancer incidence
cancer risk
electromagnetic field
exhaust gas
mineral dust
human
female
major clinical study
article
iron
oil
chromium derivative
aliphatic hydrocarbon
alicyclic hydrocarbon
lead
cadmium
aromatic hydrocarbon
formaldehyde
organic solvent
gasoline
asbestos
silicon dioxide
mineral
chromium
nickel
arsenic
diesel fuel
polycyclic aromatic hydrocarbon
RN. . . 7440-43-9; (formaldehyde) 50-00-0; (gasoline) 86290-81-5; (asbestos) 1332-21-4; (silicon dioxide) 10279-57-9, 14464-46-1, 14808-60-7, 15468-32-3, 60676-86-0, 7631-86-9; (chromium) 16065-83-1, 7440-47-3; (nickel) 7440-02-0; (**arsenic**) 7440-38-2; (diesel fuel) 68334-30-5

L8 ANSWER 20 OF 123 MEDLINE on STN DUPLICATE 4
AN 2002149995 MEDLINE
DN 21876791 PubMed ID: 11882386
TI Activation and inactivation of signal transducers and activators of transcription by ciliary neurotrophic factor in **neuroblastoma** cells.
AU Kaur Navjot; Wohlhueter Ann L; Halvorsen Stanley W
CS Department of Pharmacology and Toxicology, School of Medicine and Biomedical Sciences, 102 Faber Hall, University at Buffalo, The State University of New York, Buffalo, NY 14214-3000, USA.
NC NS30232 (NINDS)
SO CELLULAR SIGNALLING, (2002 May) 14 (5) 419-29.
Journal code: 8904683. ISSN: 0898-6568.
CY England: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200207
ED Entered STN: 20020308
Last Updated on STN: 20020703
Entered Medline: 20020702
AB Neurons in vivo are exposed to a variety of different growth factors and cytokines. A principal signalling pathway for ciliary neurotrophic factor (CNTF)-like cytokines is the Janus kinase (Jak)/signal transducer and activator of transcription (STAT) system of kinases and transcription factors. In the human cell line (SH-SY5Y), STAT1 and STAT3 activation by CNTF-like cytokines showed tyrosine phosphorylation peaking at 0.5 h and inactivating within 2 h. Tyrosine phosphorylation of the receptor-associated tyrosine kinases Jak1 and Jak2 showed a similar time course of activation and inactivation in response to CNTF. The STAT1 response to the non-CNTF-like cytokine, interferon-gamma (IFN-gamma) did not inactivate. Inactivation to CNTF was not due to a decrease in CNTF receptor subunit gp130 or in levels of Jak1 or Jak2. STAT inactivation was inhibited by the protein kinase blocker H7 and a tyrosine phosphatase blocker, but not by inhibitors of protein kinase C, mitogen-activated protein kinase (MAPK) kinase, mTOR-P70/S6 kinase or phosphatidyl inositol-3-kinase (PI-3 kinase). Surprisingly, CNTF caused only a minor increase in levels of suppressors of cytokine signalling, SOCS-1 and SOCS-3. CNTF pretreatment desensitized the cells to the CNTF-like cytokines, leukemia inhibitory factor and oncostatin-M but not to IFN-gamma. These results reveal a complex level of regulation of shared signalling pathways for cytokines that is dependent on both the type of cell and cytokine.
TI Activation and inactivation of signal transducers and activators of transcription by ciliary neurotrophic factor in **neuroblastoma** cells.
CT Check Tags: Animal; Human; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.
Antigens, CD: ME, metabolism
Arsenicals: PD, pharmacology
Cells, Cultured
Chick Embryo
Ciliary Neurotrophic Factor: AI, antagonists & inhibitors
*Ciliary Neurotrophic Factor: PD, pharmacology
Cytokines: PD, pharmacology
DNA-Binding Proteins: ME, metabolism
Dose-Response Relationship, Drug
Down-Regulation
Enzyme Inhibitors: PD, pharmacology
Kinetics
Membrane Glycoproteins: ME, metabolism
Neuroblastoma
Neurons: DE, drug effects
*Neurons: ME, metabolism

Protein Kinases: PH, physiology
Protein-Tyrosine-Phosphatase: AI, antagonists & inhibitors
*Signal Transduction
Signal. . .

CN 0 (Antigens, CD); 0 (**Arsenicals**); 0 (Ciliary Neurotrophic Factor); 0 (Cytokines); 0 (DNA-Binding Proteins); 0 (Enzyme Inhibitors); 0 (Membrane Glycoproteins); 0 (Stat3 protein); 0 (Trans-Activators);. . .

L8 ANSWER 21 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002232217 EMBASE
TI Restoration of p53 tumor suppressor pathway in human cervical carcinoma cells by sodium **arsenite**.
AU Chou R.-H.; Huang H.
CS H. Huang, Department of Life Science, National Tsing-Hua University, HsinChu 30043, Taiwan,Province of China. hmhuang@life.nthu.edu.tw
SO Biochemical and Biophysical Research Communications, (2002) 293/1 (298-306).
Refs: 53
ISSN: 0006-291X CODEN: BBRCA
PUI S 0006-291X(02)00212-7
CY United States
DT Journal; Article
FS 010 Obstetrics and Gynecology
016 Cancer
029 Clinical Biochemistry
037 Drug Literature Index
LA English
SL English
AB In most cervical cancer cells, p53 and Rb are disrupted by human papillomaviruses (HPVs) E6 and E7, respectively. Restoration of p53 or Rb function by blocking E6/p53 or E7/Rb pathway might be a potential therapeutic purpose for these cancer cells. Treatment with sodium **arsenite** (SA) resulted in significant repression of E6 and E7 mRNA levels in SiHa cells. After E6 and E7 repression, p53 was dramatically induced and accumulated in cellular nuclei and Rb was also induced. Two p53-responsive genes, p21(waf1/cip1) and mdm2, were induced after SA treatment. Furthermore, SA also reduced the expressions of Cdc25A and cyclin B, blocked cell cycle progression at G2/M phase, and induced apoptosis in SiHa cells. SA-induced apoptosis was greatly reduced by expression of a dominant-negative mutated p53. In this study, we have first demonstrated that SA did repress E6 and E7 oncogenes, restore the p53 tumor suppressor pathway and induce apoptosis in SiHa cells. Therefore, it would be a potential strategy to promote SA as therapeutic purpose for HPV-positive cancer cells.
TI Restoration of p53 tumor suppressor pathway in human cervical carcinoma cells by sodium **arsenite**.
AB . . . function by blocking E6/p53 or E7/Rb pathway might be a potential therapeutic purpose for these cancer cells. Treatment with sodium **arsenite** (SA) resulted in significant repression of E6 and E7 mRNA levels in SiHa cells. After E6 and E7 repression, p53. . .
CT Medical Descriptors:
*uterine cervix carcinoma
carcinoma cell
protein function
cell nucleus
protein induction
cell cycle G2 phase
apoptosis
protein expression
oncogene
down regulation
drug effect
human

controlled study
human cell
article
priority journal
*protein p53: EC, endogenous compound
***arsenite sodium: PD, pharmacology**
retinoblastoma protein: EC, endogenous compound
messenger RNA: EC, endogenous compound
protein p21: EC, endogenous compound
protein MDM2: EC, endogenous compound
cyclin B: EC, endogenous compound
protein. . .

RN (**arsenite** sodium) 13464-37-4; (protein p21) 85306-28-1; (protein) 67254-75-5

L8 ANSWER 22 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002098319 EMBASE
TI Intracellular accumulation of .beta.-amyloid(1-42) in neurons is facilitated by the .alpha.7 nicotinic acetylcholine receptor in Alzheimer's disease.
AU Nagele R.G.; D'Andrea M.R.; Anderson W.J.; Wang H.-Y.
CS R.G. Nagele, Department of Molecular Biology, Uni. of Med./Dentistry of New Jersey, School of Osteopathic Medicine, 2 Medical Center Drive, Stratford, NJ 08084, United States. nagelero@umdnj.edu
SO Neuroscience, (12 Mar 2002) 110/2 (199-211).
Refs: 76
ISSN: 0306-4522 CODEN: NRSCDN
PUI S 0306-4522(01)00460-2
CY United Kingdom
DT Journal; Article
FS 005 General Pathology and Pathological Anatomy
008 Neurology and Neurosurgery
029 Clinical Biochemistry
LA English
SL English
AB Amyloid .beta.(1-42), a major component of amyloid plaques, binds with exceptionally high affinity to the .alpha.7 nicotinic acetylcholine receptor and accumulates intracellularly in neurons of Alzheimer's disease brains. In this study, we investigated the possibility that this binding plays a key role in facilitating intraneuronal accumulation of amyloid .beta.(1-42). Consecutive section immunohistochemistry and digital imaging were used to reveal the spatial relationship between amyloid .beta.(1-42) and the .alpha.7 receptor in affected neurons of Alzheimer's disease brains. Results showed that neurons containing substantial intracellular accumulations of amyloid .beta.(1-42) invariably express relatively high levels of the .alpha.7 receptor. Furthermore, this receptor is highly co-localized with amyloid .beta.(1-42) within neurons of Alzheimer's disease brains. To experimentally test the possibility that the binding interaction between exogenous amyloid .beta.(1-42) and the .alpha.7 receptor facilitates internalization and intracellular accumulation of amyloid .beta.(1-42) in Alzheimer's disease brains, we studied the fate of exogenous amyloid .beta.(1-42) and its interaction with the .alpha.7 receptor in vitro using cultured, transfected **neuroblastoma** cells that express elevated levels of this receptor. Transfected cells exhibited rapid binding, internalization and accumulation of exogenous amyloid .beta.(1-42), but not amyloid .beta.(1-40). Furthermore, the rate and extent of amyloid .beta.(1-42) internalization was related directly to the .alpha.7 receptor protein level, since (1) the rate of amyloid .beta.(1-42) accumulation was much lower in untransfected cells that express much lower levels of this receptor and (2) internalization was effectively blocked by .alpha.-bungarotoxin, an .alpha.7 receptor antagonist. As in neurons of Alzheimer's disease brains, the .alpha.7 receptor in transfected cells was precisely co-localized with amyloid .beta.(1-42) in prominent intracellular aggregates. Internalization of

amyloid .beta.(1-42) in transfected cells was blocked by phenylarsine oxide, an inhibitor of endocytosis. We suggest that the intraneuronal accumulation of amyloid .beta.(1-42) in Alzheimer's disease brains occurs predominantly in neurons that express the .alpha.7 receptor. In addition, internalization of amyloid .beta.(1-42) may be facilitated by the high-affinity binding of amyloid .beta.(1-42) to the .alpha.7 receptor on neuronal cell surfaces, followed by endocytosis of the resulting complex. This provides a plausible explanation for the selective vulnerability of neurons expressing the .alpha.7 receptor in Alzheimer's disease brains and for the fact that amyloid .beta.(1-42) is the dominant amyloid .beta. peptide species in intracellular accumulations and amyloid plaques.

AB . . . we studied the fate of exogenous amyloid .beta.(1-42) and its interaction with the .alpha.7 receptor in vitro using cultured, transfected **neuroblastoma** cells that express elevated levels of this receptor. Transfected cells exhibited rapid binding, internalization and accumulation of exogenous amyloid .beta.(1-42),. . .

CT Medical Descriptors:
*Alzheimer disease
*brain nerve cell
disease association
protein binding
protein analysis
immunohistochemistry
imaging
cell assay
brain
protein expression
protein localization
protein protein interaction
in vitro study
cell culture
genetic transfection
neuroblastoma cell
cell level
internalization
endocytosis
cell surface
human
controlled study
human tissue
human cell
aged
article
priority journal
*amyloid beta protein: EC, endogenous compound
*nicotinic receptor: EC, endogenous compound
alpha bungarotoxin
receptor blocking agent
arsenosobenzene
peptide: EC, endogenous compound

RN (amyloid beta protein) 109770-29-8; (alpha bungarotoxin) 11032-79-4; (**arsenosobenzene**) 637-03-6

L8 ANSWER 23 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:95271 CAPLUS
DN 136:395484
TI Molecular and cellular characterization of imexon-resistant RPMI8226/I myeloma cells
AU Dvorakova, Katerina; Payne, Claire M.; Tome, Margaret E.; Briehl, Margaret M.; Vasquez, Miguel A.; Waltmire, Caroline N.; Coon, Amy; Dorr, Robert T.
CS Arizona Cancer Center, University of Arizona, Tucson, AZ, 85724, USA
SO Molecular Cancer Therapeutics (2002), 1(3), 185-195

CODEN: MCTOCF; ISSN: 1535-7163
PB American Association for Cancer Research
DT Journal
LA English
AB Imexon is an aziridine-contg. iminopyrrolidone with selective growth-inhibitory potency for multiple myeloma. Our previous research indicates that imexon induces mitochondrial alterations, oxidative stress, and apoptosis. This drug represents an interesting model drug with a nonmyelosuppressive profile to study the basic mechanisms leading to antitumor activity and resistance. The major purpose of this study was to characterize an imexon-resistant RPMI8226/I cell line that was developed from RPMI8226 cells by continuous exposure to imexon. No significant differences were obsd. in the sensitivity to several cytotoxic drugs, including mitoxantrone, mitomycin C, melphalan, methotrexate, cytarabine, cisplatin, vincristine, and paclitaxel, in the imexon-resistant cells. However, RPMI8226/I cells were cross-resistant to **arsenic** trioxide, doxorubicin, fluorouracil, etoposide, irinotecan, and esp. IFN-.alpha.. The data from DNA microarray and Western blot analyses indicated that the levels of antiapoptotic proteins Bcl-2 and thioredoxin-2, which reside mainly in the mitochondria, are increased in RPMI8226/I cells. In addn., increased levels of lung resistance protein were detected in imexon-resistant cells. Expression of P-glycoprotein was not detected in RPMI8226/I cells. No loss of mitochondrial membrane potential or increase in the levels of reactive oxygen species was obsd. in RPMI8226/I cells after exposure to imexon; however, the levels of glutathione are increased in the RPMI8226/I cells. TEM revealed significant changes in the mitochondrial morphol. of RPMI8226/I cells, whereas no ultrastructural changes were obsd. in other cellular compartments. Imexon-resistant RPMI8226/I myeloma cells appear to have a unique mechanism of resistance that is assocd. with morphol. alterations of mitochondria, increased protection against oxidative stress, elevated levels of glutathione, and enhanced expression of antiapoptotic mitochondrial proteins.
RÉ.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB Imexon is an aziridine-contg. iminopyrrolidone with selective growth-inhibitory potency for multiple myeloma. Our previous research indicates that imexon induces mitochondrial alterations, oxidative stress, and apoptosis. This drug represents an interesting model drug with a nonmyelosuppressive profile to study the basic mechanisms leading to antitumor activity and resistance. The major purpose of this study was to characterize an imexon-resistant RPMI8226/I cell line that was developed from RPMI8226 cells by continuous exposure to imexon. No significant differences were obsd. in the sensitivity to several cytotoxic drugs, including mitoxantrone, mitomycin C, melphalan, methotrexate, cytarabine, cisplatin, vincristine, and paclitaxel, in the imexon-resistant cells. However, RPMI8226/I cells were cross-resistant to **arsenic** trioxide, doxorubicin, fluorouracil, etoposide, irinotecan, and esp. IFN-.alpha.. The data from DNA microarray and Western blot analyses indicated that the levels of antiapoptotic proteins Bcl-2 and thioredoxin-2, which reside mainly in the mitochondria, are increased in RPMI8226/I cells. In addn., increased levels of lung resistance protein were detected in imexon-resistant cells. Expression of P-glycoprotein was not detected in RPMI8226/I cells. No loss of mitochondrial membrane potential or increase in the levels of reactive oxygen species was obsd. in RPMI8226/I cells after exposure to imexon; however, the levels of glutathione are increased in the RPMI8226/I cells. TEM revealed significant changes in the mitochondrial morphol. of RPMI8226/I cells, whereas no ultrastructural changes were obsd. in other cellular compartments. Imexon-resistant RPMI8226/I myeloma cells appear to have a unique mechanism of resistance that is assocd. with morphol. alterations of mitochondria, increased protection against oxidative stress, elevated levels of glutathione, and enhanced expression of antiapoptotic mitochondrial proteins.

IT Proteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**retinoblastoma**-binding protein 4, gene encoding; mol. and cellular characterization of imexon-resistant RPMI8226/I myeloma cells in relation to cross-resistance)

IT 50-07-7, Mitomycin C 51-21-8, 5-Fluorouracil 57-22-7, Vincristine 59-05-2, Methotrexate 147-94-4, Cytarabine 148-82-3, Melphalan 930-88-1, N-Methylmaleimide 1327-53-3, **Arsenic** trioxide 15663-27-1, Cisplatin 23214-92-8, Doxorubicin 33069-62-4, Paclitaxel 33419-42-0, Etoposide 59643-91-3, Imexon 65271-80-9, Mitoxantrone 97682-44-5, Irinotecan
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(mol. and cellular characterization of imexon-resistant RPMI8226/I myeloma cells in relation to cross-resistance)

L8 ANSWER 24 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002211728 EMBASE
TI [Angiogenesis inhibitors: A new therapeutic approach in cancer therapy]. ANGIOGENESE-INHIBITOREN: EINE NEUE WIRKSTOFFGRUPPE IN DER KREBSTHERAPIE.
AU Ibrom W.
CS Dr. W. Ibrom, Apotheke des Krankhs. St. Josef GmbH, Ringstr. 60A, A-5280 Braunau am Inn, Austria. wolfgang.ibrom@khbr.or.at
SO Krankenhauspharmazie, (2002) 23/5 (181-192).
Refs: 40
ISSN: 0173-7597 CODEN: KRANDZ
CY Germany
DT Journal; Article
FS 016 Cancer
018 Cardiovascular Diseases and Cardiovascular Surgery
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA German
SL English; German
AB The growth of solid tumors and metastases beyond a limited size of 1-2 mm(3) in diameter depends on angiogenesis. This dynamic process is tightly controlled by a large number of proangiogenic and antiangiogenic factors, their receptors and signal transduction pathways respectively which are representing new targets for an antiangiogenic therapy. Many of these factors are involved with an intrinsic or associated tyrosine kinase activity. The pharmacodynamic targeting of tumor angiogenesis may be divided into seven major categories: 1. Antagonists of angiogenic growth factors 2. Inhibitors of endothelial cell signal transduction 3. Inhibitors of endothelial cell proliferation and migration 4. Inhibitors of cell adhesion molecules 5. Vascular thrombosis inducing agents 6. Non-selective angiogenesis inhibitors 6.1 Matrix metalloproteinase inhibitors 6.2 Inhibitors of cofactors 7. Anti-angiogenic agents with different mechanisms of action Angiogenesis inhibitors were investigated in clinical trials for the therapy of solid tumors, like lung (SCLC, NSCLC), breast, colon, gastric tumors, **glioblastoma**, melanoma, in addition lymphomas and multiple myeloma, where effective conventional therapies and regimes do not exist so far. Finally the antiangiogenic therapy is compared with conventional chemotherapy. The pharmacological profile of angiogenesis inhibition differs basically from established chemotherapy: As a result of in the unique therapeutic target at the tumor endothelial cells, the drug resistance may be less a problem. Other differerences are the moderate spectrum of side effects, the longterm maintenance therapy and the cytostatic mechanism of action. Also combination of antiangiogenic agents with conventional cytotoxic drugs enhances the effect of the latter. At the end of 2001 approx. 50 angiogenesis inhibitors were investigated in clinical studies I-III, in the next three years the first antiangiogenic drug for the treatment of neoplasms will be on approval.

AB . . . inhibitors were investigated in clinical trials for the therapy of solid tumors, like lung (SCLC, NSCLC), breast, colon, gastric tumors, **glioblastoma**, melanoma, in addition lymphomas and multiple myeloma, where effective conventional therapies and regimes do not exist so far. Finally the. . .

CT Medical Descriptors:
*angiogenesis
*inhibition . . . development
receptor binding
signal transduction
drug targeting
endothelium cell
cell proliferation
cell migration
cell adhesion
thrombosis
lung cancer: DT, drug therapy
breast cancer: DT, drug therapy
colon cancer: DT, drug therapy
stomach tumor
glioblastoma
melanoma
lymphoma
multiple myeloma
drug resistance
side effect: SI, side effect
combination chemotherapy
human
major clinical study
clinical trial
phase 1 clinical trial
phase 2 clinical trial
phase 3 clinical trial
article
*angiogenesis. . . drug development
fumagillol chloroacetylcarbamate: PD, pharmacology
angiostatin: AN, drug analysis
angiostatin: DV, drug development
angiostatin: PD, pharmacology
endostatin: AN, drug analysis
endostatin: DV, drug development
endostatin: PD, pharmacology
arsenic trioxide: AN, drug analysis
arsenic trioxide: DV, drug development
arsenic trioxide: PD, pharmacology
2 methoxyestradiol: AN, drug analysis
2 methoxyestradiol: DV, drug development
2 methoxyestradiol: PD, pharmacology
cilengitide: AN, drug analysis
cilengitide: DV, drug development
cilengitide:. . .

RN. . . 6 methoxy 7 [2 (1h 1,2,3 triazol 1 yl)ethoxy] 4 quinazolinamine) 257938-36-6; (fumagillol chloroacetylcarbamate) 129298-91-5; (angiostatin) 172642-30-7, 86090-08-6; (endostatin) 187888-07-9; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (2 methoxyestradiol) 362-07-2; (cilengitide) 188968-51-6; (squalamine) 148717-90-2, 160022-48-0; (serine 2 methoxy 5 [2 (3,4,5 trimethoxyphenyl)vinyl]anilide). . .

L8 ANSWER 25 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:562327 CAPLUS
DN 137:364518
TI Comparisons of human-cell-based and submitochondrial particle bioassay responses to the MEIC compounds in reference to human toxicity data

AU Gustavson, Karl E.; Read, Harry W.; Harkin, John M.
CS Harvard Bioscience, Madison, WI, 53711, USA
SO Toxicology (2002), 177(2-3), 131-142
CODEN: TXCYAC; ISSN: 0300-483X
PB Elsevier Science Ltd.
DT Journal
LA English
AB Toxicity results from submitochondrial particle (SMP) bioassays were compared to results from multiple human-cell-based assays to evaluate the SMP tests' ability to indicate cellular toxicity. Correlation analyses between cell-based and SMP responses were conducted on a series of diverse chems. of human toxicol. interest chosen in the Multicentre Evaluation of In vitro Cytotoxicity (MEIC) study and suggest a high degree of ordering. The r2 correlation coeff. obtained when comparing the log-transformed SMP results to the av. cellular response for all compds. was 0.75 (n=42). When specific mitochondrial inhibitors (to which SMP arc extremely sensitive) and toxic metals (which SMP modeled poorly) were removed, the correlation improved to 0.91 (n=34). When the SMP assay of each individual cell-based assay was compared to the av. toxic response of all the cell-based assays for these 34 compds., the SMP r2 was greater than the median r2 of the cell-based assays, indicating its ability to predict cell-based toxic responses with a high degree of accuracy. Comparisons of the SMP data to the human toxicity data are similar to the cell line assays, where removal of the specific mitochondrial toxicants and metals greatly improves the relationship.
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Nerve, neoplasm
(**neuroblastoma**; human-cell-based and submitochondrial particle bioassay responses to the MEIC compds. in ref. to human toxicity data)
IT 50-54-4, Quinidine sulfate 50-63-5, Chloroquine diphosphate 50-78-2, Acetylsalicylic acid 54-11-5, Nicotine 54-85-3, Isoniazid 55-48-1, Atropine sulfate 56-75-7, Chloramphenicol 57-30-7, Sodium phenobarbital 57-41-0, Diphenylhydantoin 58-08-2, Caffeine, biological studies 58-55-9, Theophylline, biological studies 58-89-9, Lindane 60-13-9, Amphetamine sulfate 62-76-0, Sodium oxalate 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 67-63-0, Isopropanol, biological studies 70-30-4, Hexachlorophen 81-81-2, Warfarin 87-86-5, Pentachlorophenol 94-75-7, 2,4-Dichlorophenoxyacetic acid, biological studies 103-90-2, Paracetamol 107-21-1, Ethylene glycol, biological studies 108-95-2, Phenol, biological studies 121-75-5, Malathion 130-61-0, Thioridazine hydrochloride 151-50-8, Potassium cyanide 152-11-4, Verapamil hydrochloride 318-98-9, Propranolol hydrochloride 341-69-5, Orphenadrine hydrochloride 439-14-5, Diazepam 549-18-8, Amitriptyline hydrochloride 1327-53-3, **Arsenic** trioxide 1639-60-7, Dextropropoxyphene hydrochloride 1910-42-5 7446-18-6, Thallium sulfate 7447-40-7, Potassium chloride, biological studies 7447-41-8, Lithium chloride, biological studies 7487-94-7, Mercury (II) chloride, biological studies 7647-14-5, Sodium chloride, biological studies 7681-49-4, Sodium fluoride, biological studies 7758-98-7, Copper (II) sulfate, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(human-cell-based and submitochondrial particle bioassay responses to the MEIC compds. in ref. to human toxicity data)

L8 ANSWER 26 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002090433 EMBASE
TI [Orphan drugs - Research and development in the service of patients].
ORPHAN DRUGS - FUE IM DIENSTE DER PATIENTEN.
AU Walluf-Blume D.
CS Dr. D. Walluf-Blume, Leiterin Forschung und Entwicklung, Bundesverband der Pharmzeut. Indust., Karlstrasse 21, 60329 Frankfurt/Main, Germany
SO Deutsche Apotheker Zeitung, (28 Feb 2002) 142/9 (75-79).

ISSN: 0011-9857 CODEN: DAZEA2
CY Germany
DT Journal; Article
FS 017 Public Health, Social Medicine and Epidemiology
037 Drug Literature Index
LA German
CT Medical Descriptors:
*drug . . . DT, drug therapy
nonhodgkin lymphoma: DT, drug therapy
T cell lymphoma: DT, drug therapy
soft tissue sarcoma: DT, drug therapy
Huntington chorea: DT, drug therapy
glioblastoma: DT, drug therapy
Wegener granulomatosis: DT, drug therapy
emphysema: DT, drug therapy
systemic sclerosis: DT, drug therapy
ovary cancer: DT, drug therapy
patent ductus arteriosus:. . .
dextro glucitol: DT, drug therapy
8 cyclopentyl 1,3 dipropylxanthine: DT, drug therapy
alpha galactosidase: DT, drug therapy
anagrelide: DT, drug therapy
apomorphine: DT, drug therapy
arsenic trioxide: DT, drug therapy
beraprost: DT, drug therapy
betaine: DT, drug therapy
bosentan: DT, drug therapy
busulfan: DT, drug therapy
celecoxib: DT, drug therapy
cladribine: DT,. . .
RN (glucagon like peptide) 82905-30-4; (8 cyclopentyl 1,3 dipropylxanthine) 102146-07-6; (alpha galactosidase) 9023-01-2; (anagrelide) 68475-42-3; (apomorphine) 314-19-2, 58-00-4; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (beraprost) 88430-50-6, 88475-69-8; (betaine) 107-43-7, 590-46-5; (busulfan) 55-98-1; (celecoxib) 169590-42-5; (cladribine) 4291-63-8; (denileukin diftitox) 173146-27-5;. . .

L8 ANSWER 27 OF 123 MEDLINE on STN
AN 2002338502 MEDLINE
DN 22057959 PubMed ID: 12063549
TI Effect of As2O3 on cell cycle progression and cyclins D1 and B1 expression in two **glioblastoma** cell lines differing in p53 status.
AU Zhao Shiguang; Tsuchida Takahiro; Kawakami Katsuhiro; Shi Changbin; Kawamoto Keiji
CS Department of Neurosurgery, Kansai Medical University, Moriguchi city, Osaka 570-8506, Japan.
SO INTERNATIONAL JOURNAL OF ONCOLOGY, (2002 Jul) 21 (1) 49-55.
Journal code: 9306042. ISSN: 1019-6439.
CY Greece
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200212
ED Entered STN: 20020626
Last Updated on STN: 20021217
Entered Medline: 20021202
AB Recent clinical studies have demonstrated that As2O3 is an effective drug in the treatment of acute promyelocytic leukemia (APL) by inducing apoptosis and inhibiting the proliferation of leukemia cells both in vitro and in vivo. As a novel anticancer agent for the treatment of solid cancer, As2O3 is promising, but no experimental investigations of its efficacy on **glioblastoma** have been conducted at concentrations that may be achieved clinically. In addition, the cell proliferation and cell cycle regulating mechanism of As2O3 has not yet to be clarified,

especially in solid cancers. We investigated the effect of As2O3 on proliferation and cell cycle regulation with change in cyclins in two human **glioblastoma** cell lines differing in p53 status (U87MG-wt; T98G-mutated). Sensitivity to As2O3 varied depending on the dose with the IC50 of the U87MG and T98G cells being 1.78 and 3.55 microM, respectively. Analysis by laser scanning cytometry (LSC) indicated that As2O3 inhibited the proliferation of the two cell lines via cell cycle arrest both at the G1 and G2 phases. To address the mechanism of the antiproliferative effect of As2O3, we examined its effect on cell cycle-related proteins by means of LSC, confocal microscopy and Western blot analysis. As2O3 induced an increase in p53 level and a decrease in level of cyclin B1 combined with cell arrest at G2/M in both cell lines. Cell arrest in G1, however, was associated with a decline in cyclin D1 expression only in the wt U87MG cells. As2O3 also induced apoptosis of U87MG cells as evidenced by the presence of cells with fractional DNA content (cell populations). The present evidence that As2O3 at relatively low concentration effectively inhibited proliferation of U87MG and T98G cells in vitro, suggests that the drug may be considered for in vivo testing on animal models and possibly clinical trials on glioma patients.

TI Effect of As2O3 on cell cycle progression and cyclins D1 and B1 expression in two **glioblastoma** cell lines differing in p53 status.

AB . . . novel anticancer agent for the treatment of solid cancer, As2O3 is promising, but no experimental investigations of its efficacy on **glioblastoma** have been conducted at concentrations that may be achieved clinically. In addition, the cell proliferation and cell cycle regulating mechanism. . . cancers. We investigated the effect of As2O3 on proliferation and cell cycle regulation with change in cyclins in two human **glioblastoma** cell lines differing in p53 status (U87MG-wt; T98G-mutated). Sensitivity to As2O3 varied depending on the dose with the IC50 of. . .

CT Check Tags: Human; Support, Non-U.S. Gov't
***Arsenicals: PD, pharmacology**
Blotting, Western
Brain Neoplasms: DT, drug therapy
***Brain Neoplasms: ME, metabolism**
Brain Neoplasms: PA, pathology
*Cell Cycle: DE, drug effects
Cell Division: DE, drug effects
*Cyclin B: ME, metabolism
*Cyclin D1: ME, metabolism
Dose-Response Relationship, Drug
Flow Cytometry
Glioblastoma: DT, drug therapy
***Glioblastoma: ME, metabolism**
Glioblastoma: PA, pathology
*Oxides: PD, pharmacology
*Protein p53: ME, metabolism
*Tumor Cells, Cultured: DE, drug effects
Tumor Cells, Cultured: ME,. . .

RN **1327-53-3 (arsenic trioxide)**; 136601-57-5 (Cyclin D1)

CN 0 (**Arsenicals**); 0 (Cyclin B); 0 (Oxides); 0 (Protein p53); 0 (cyclin B1)

L8 ANSWER 28 OF 123 MEDLINE on STN DUPLICATE 5

AN 2002079345 MEDLINE

DN 21666195 PubMed ID: 11807808

TI Involvement of p38 mitogen-activated protein kinase in the cell growth inhibition by sodium **arsenite**.

AU Kim Ja-Young; Choi Jung-A; Kim Tae-Hwan; Yoo Young-Do; Kim Jong-Il; Lee Yong J; Yoo Seong-Yul; Cho Chul-Koo; Lee Yun-Sil; Lee Su-Jae

CS Laboratory of Radiation Effect, Korea Cancer Center Hospital, Gongneung-Dong, Nowon-Ku, Seoul 139-706, Korea.

SO JOURNAL OF CELLULAR PHYSIOLOGY, (2002 Jan) 190 (1) 29-37. Journal code: 0050222. ISSN: 0021-9541.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200201
ED Entered STN: 20020128
Last Updated on STN: 20020201
Entered Medline: 20020131
AB It is well-known that p38 mitogen-activated protein kinase (p38MAPK) participates in cellular responses to mitogenic stimuli, environmental and genotoxic stresses, and apoptotic agents. Although there are several reports on p38MAPK in relation to cell growth and apoptosis, the exact mechanism of p38MAPK-mediated cell growth regulation remains obscure. Here, we examined possible roles of p38MAPK in the sodium **arsenite** -induced cell growth inhibition in NIH3T3 cells. Sodium **arsenite** induced transient cell growth delay with marked activation of p38MAPK. In addition, **arsenite** induced CDK inhibitor p21(CIP1/WAF1) and enhanced its binding to the CDK2, which resulted in inhibition of CDK2 activity. The levels of cyclin D1 expression and the CDK4 kinase activity were also significantly reduced. pRB was hypophosphorylated by sodium **arsenite**. SB203580, a specific inhibitor of p38MAPK, blocked **arsenite**-induced growth inhibition as well as the **arsenite** -induced p21(CIP1/WAF1) expression. Expression of dominant negative p38MAPK also blocked **arsenite**-induced p21(CIP1/WAF1) expression. Inhibited-CDK2 activity was also completely reversed by SB203580 or expression of dominant negative p38MAPK, while the decreased-cyclin D1 protein by the compound was not restored. These data demonstrate a possible link between the activation of p38MAPK and induction of p21(CIP1/WAF1), suggesting that the activation of p38MAPK is, at least in part, related to the cell growth inhibition by sodium **arsenite**.

TI Involvement of p38 mitogen-activated protein kinase in the cell growth inhibition by sodium **arsenite**.
AB . . . the exact mechanism of p38MAPK-mediated cell growth regulation remains obscure. Here, we examined possible roles of p38MAPK in the sodium **arsenite**-induced cell growth inhibition in NIH3T3 cells. Sodium **arsenite** induced transient cell growth delay with marked activation of p38MAPK. In addition, **arsenite** induced CDK inhibitor p21(CIP1/WAF1) and enhanced its binding to the CDK2, which resulted in inhibition of CDK2 activity. The levels of cyclin D1 expression and the CDK4 kinase activity were also significantly reduced. pRB was hypophosphorylated by sodium **arsenite**. SB203580, a specific inhibitor of p38MAPK, blocked **arsenite**-induced growth inhibition as well as the **arsenite**-induced p21(CIP1/WAF1) expression. Expression of dominant negative p38MAPK also blocked **arsenite**-induced p21(CIP1/WAF1) expression. Inhibited-CDK2 activity was also completely reversed by SB203580 or expression of dominant negative p38MAPK, while the decreased-cyclin D1. . . p21(CIP1/WAF1), suggesting that the activation of p38MAPK is, at least in part, related to the cell growth inhibition by sodium **arsenite**.

CT Check Tags: Animal; Support, Non-U.S. Gov't
3T3 Cells: CY, cytology
*3T3 Cells: DE, drug effects
*3T3 Cells: EN, enzymology
***Arsenites: PD, pharmacology**
Cell Division: DE, drug effects
Cyclin A: ME, metabolism
Cyclin D1: ME, metabolism
Cyclin E: ME, metabolism
Cyclin-Dependent. . . Kinases: ME, metabolism
Phosphorylation: DE, drug effects
Protein-Serine-Threonine Kinases: AI, antagonists & inhibitors
Protein-Serine-Threonine Kinases: ME, metabolism

Pyridines: PD, pharmacology
Retinoblastoma Protein: ME, metabolism
*Sodium Compounds: PD, pharmacology
Transfection
RN 136601-57-5 (Cyclin D1); **13768-07-5 (sodium arsenite)**
CN 0 (**Arsenites**); 0 (Cip1 protein); 0 (Cyclin A); 0 (Cyclin E); 0 (Cyclins); 0 (Enzyme Inhibitors); 0 (Imidazoles); 0 (Pyridines); 0 (Retinoblastoma. . .

L8 ANSWER 29 OF 123 MEDLINE on STN DUPLICATE 6
AN 2001391098 MEDLINE
DN 21338671 PubMed ID: 11445819
TI **Arsenic** poisoning caused by Indian ethnic remedies.
AU Muzi G; Dell'omo M; Madeo G; Abbritti G; Caroli S
SO JOURNAL OF PEDIATRICS, (2001 Jul) 139 (1) 169.
Journal code: 0375410. ISSN: 0022-3476.
CY United States
DT Letter
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 200108
ED Entered STN: 20010820
Last Updated on STN: 20010820
Entered Medline: 20010816
TI **Arsenic** poisoning caused by Indian ethnic remedies.
CT Check Tags: Case Report; Human; Male
***Arsenic Poisoning: ET, etiology**
Child, Preschool
India
*Medicine, Traditional
Retinoblastoma: TH, therapy

L8 ANSWER 30 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 7
AN 2001:816459 CAPLUS
DN 135:339302
TI Methods and compositions for enhancing cellular function through protection of tissue components
IN Frey, William H., II; Fawcett, John Randall; Thorne, Robert Gary; Chen, Xueqing
PA Healthpartners Research Foundation, USA
SO PCT Int. Appl., 77 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001082932	A2	20011108	WO 2001-US13931	20010430
WO 2001082932	A3	20020718		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002028786	A1	20020307	US 2001-844450	20010427
EP 1278525	A2	20030129	EP 2001-930957	20010430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRAI US 2000-200843P	P	20000501		
US 2000-230263P	P	20000906		

US 2000-233025P P 20000915
US 2000-233263P P 20000918
WO 2001-US13931 W 20010430

OS MARPAT 135:339302

AB Methods and compns. for enhancing cellular function through protection of tissue components, such as receptors, proteins, lipids, nucleic acids, carbohydrates, hormones, vitamins, and cofactors, by administering pyrophosphate analogs or related compds. Preferably, the invention provides a method for protecting a muscarinic acetylcholine receptor (mAChR) an/or increasing the efficacy of and agent the directly or indirectly affects a mAChR in a subject in need thereof.

IT **Brain**, **neoplasm**
(inhibitors; methods and compns. for enhancing cellular function through protection of tissue components such as muscarinic receptors by administering pyrophosphate analogs and combination with other agents)

IT **Spinal cord**
(**neoplasm**, inhibitors; methods and compns. for enhancing cellular function through protection of tissue components such as muscarinic receptors by administering pyrophosphate analogs and combination with other agents)

IT 7439-89-6, Iron, biological studies 7439-92-1, Lead, biological studies 7439-97-6, Mercury, biological studies 7440-02-0, Nickel, biological studies 7440-38-2, **Arsenic**, biological studies 7440-43-9, Cadmium, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-62-2, Vanadium, biological studies 14280-50-3, Lead, ion (Pb+2), biological studies 14302-87-5, Mercuric ion, biological studies 15158-11-9, Cupric ion, biological studies 15438-31-0, Ferrous ion, biological studies 22537-48-0, Cadmium, ion (Cd+2), biological studies 22541-54-4, **Arsenic**, ion (As+3), biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(protection from poisoning from; methods and compns. for enhancing cellular function through protection of tissue components such as muscarinic receptors by administering pyrophosphate analogs and combination with other agents)

L8 ANSWER 31 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 8
AN 2001:798032 CAPLUS
DN 135:327377
TI Administration of a thiol-based chemoprotectant compound
IN Pagel, Michael A.; Muldoon, Leslie; Neuwelt, Edward A.
PA Oregon Health Sciences University, USA; Government of the United States; Department of Veterans Affairs
SO PCT Int. Appl., 46 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001080832	A2	20011101	WO 2001-US40624	20010426
WO 2001080832	A3	20030515		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1328253	A2	20030723	EP 2001-927472	20010426

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

PRAI US 2000-199936P P 20000426
US 2000-229870P P 20000830
WO 2001-US40624 W 20010426

AB A method of administration of a thiol-based chemoprotectant agent including NAC (N-acetylcysteine) and STS (sodium thiosulfate) that markedly affects biodistribution and protects against injury from diagnostic or therapeutic intra-arterial procedures. A method for treating or mitigating the side effects of cytotoxic cancer therapy for tumors located in the head or neck and **brain tumors**. The thiol-based chemoprotectant agent is administered intra-arterially with rapid and first pass uptake in organs and tissues other than the liver.

AB A method of administration of a thiol-based chemoprotectant agent including NAC (N-acetylcysteine) and STS (sodium thiosulfate) that markedly affects biodistribution and protects against injury from diagnostic or therapeutic intra-arterial procedures. A method for treating or mitigating the side effects of cytotoxic cancer therapy for tumors located in the head or neck and **brain tumors**. The thiol-based chemoprotectant agent is administered intra-arterially with rapid and first pass uptake in organs and tissues other than the liver.

IT **Brain**, **neoplasm**
(inhibitors; intraarterial administration of a thiol-based chemoprotectant compd. for use against injury from cancer diagnostic or therapeutic procedures)

IT 148-82-3, Melphalan 5072-26-4, Buthionine sulfoximine 7440-06-4D, Platinum, compds., biological studies 7440-38-2D, **Arsenic**, derivs., biological studies 15663-27-1, Cisplatinum 23214-92-8, Doxorubicin 25316-40-9, Adriamycin 33069-62-4, Paclitaxel 33419-42-0, Etoposide 41575-94-4, Carboplatin 117091-64-2, Etoposide phosphate
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(toxicity; intraarterial administration of a thiol-based chemoprotectant compd. for use against injury from cancer diagnostic or therapeutic procedures)

L8 ANSWER 32 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:731095 CAPLUS
DN 135:285364
TI Compositions and methods for identifying and targeting cancer cells
IN Waldman, Scott A.; Park, Jason; Schulz, Stephanie
PA Thomas Jefferson University, USA
SO PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2001073133	A1	20011004	WO 2001-US9918	20010327
WO 2001073133	C2	20030612		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2001029019	A1	20011011	US 2001-819249	20010327
US 2001029020	A1	20011011	US 2001-819254	20010327
US 2001036635	A1	20011101	US 2001-819247	20010327

US 2001039016 A1 20011108 US 2001-819248 20010327
US 2001039017 A1 20011108 US 2001-819252 20010327
US 2002012931 A1 20020131 US 2001-820215 20010327
EP 1274861 A1 20030115 EP 2001-922785 20010327
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI US 2000-192229P P 20000327
WO 2001-US9918 W 20010327
AB Screening and diagnostic reagents, kits and methods for metastatic colorectal cancer or primary and/or metastatic stomach or esophageal cancer are disclosed. Compds., compns. and methods of treating patients with metastatic colorectal cancer or stomach or esophageal cancer and for imaging metastatic colorectal cancer or stomach or esophageal tumors in vivo are disclosed. Compns. and methods for delivering active compds. such as drugs, gene therapeutics and antisense compds. to metastatic colorectal cancer or stomach or esophageal cells are disclosed. Vaccines compns. and methods of for treating and preventing metastatic colorectal cancer or primary and/or metastatic stomach or esophageal cancer are disclosed.
IT Animal cell
Animal cell line
Bladder
Blood analysis
Body fluid
Bone
Bone marrow
Brain
Brain, neoplasm
Cerebrospinal fluid
Clostridium perfringens
Composition
Containers
Drug screening
Drug targeting
Drugs
Esophagus
Fluids
HeLa cell
Imaging
Immunoassay
Intestine
Kidney
Liver
Liver, neoplasm
Lung
Lung, neoplasm
Lymph
Lymph node
Lymphatic system
Mammal (Mammalia)
Mammary gland
Molecules
Mouth
Muscle
Neoplasm
Organ, animal
Ovary
PCR (polymerase chain reaction)
Pancreas
Pharynx
Prostate gland
Pseudomonas
Radiography
Samples

Skin
Skin, neoplasm
Stomach
Stomach, neoplasm
Test kits
Testis
Thyroid gland
Thyroid gland, neoplasm
Translation, genetic
Uterus
Vaccines
(compns. and methods for identifying and targeting cancer cells)

IT 10043-66-0, iodine-131, biological studies 10098-91-6, yttrium-90, biological studies 13981-50-5, cobalt-57, biological studies 13981-51-6, 197Hg, biological studies 13982-64-4, 87Sr, biological studies 14093-04-0, iron-52, biological studies 14119-09-6, gallium-67, biological studies 14119-24-5, 191Os, biological studies 14133-76-7, 99Tc, biological studies 14158-31-7, iodine 125, biological studies 14265-75-9, lutetium-177, biological studies 14374-81-3, germanium-71, biological studies 14378-26-8, 188Re, biological studies 14391-11-8, 199Au, biological studies 14391-19-6, 161Tb, biological studies 14391-96-9, scandium-47, biological studies 14596-37-3, 32p, biological studies 14683-06-8, 121Sn, biological studies 14683-16-0, iodine-132, biological studies 14687-25-3, lead-203, biological studies 14687-61-7, **arsenic**-77, biological studies 14885-78-0, 113In, biological studies 14903-02-7, potassium-43, biological studies 14913-89-4, 105Rh, biological studies 14914-68-2, 119Sb, biological studies 14914-76-2, Cesium 131, biological studies 14981-64-7, 109Pd, biological studies 14981-79-4, 143Pr, biological studies 14998-63-1, 186Re, biological studies 15047-05-9, 129Cs, biological studies 15092-94-1, 212Pb, biological studies 15715-08-9, iodine 123, biological studies 15720-35-1, cesium-127, biological studies 15735-70-3, Platinum 193, biological studies 15749-66-3, phosphorus-33, biological studies 15750-15-9, Indium 111, biological studies 15755-39-2, astatine-211, biological studies 15757-14-9, gallium-68, biological studies 15757-86-5, copper-67, biological studies 15760-04-0, silver-111, biological studies 15765-39-6, bromine-77, biological studies 15776-19-9, bismuth-206, biological studies 18268-34-3, 81Rb, biological studies
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. and methods for identifying and targeting cancer cells)

L8 ANSWER 33 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2001:813414 CAPLUS
DN 135:352828
TI Methods for production of the oxidized glutathione composite with cis-diamminedichloroplatinum, and pharmaceutical compositions based thereon, for regulating metabolism, proliferation, differentiation and apoptotic mechanisms for normal and transformed cells
IN Kozhemyakin, Leonid A.; Balasovski, Mark B.
PA Novelos Therapeutics, Inc., USA
SO U.S., 73 pp., Cont.-in-part of U.S. Ser. No. 237,801, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6312734	B1	20011106	US 1999-241232	19990201
	RU 2144374	C1	20000120	RU 1998-120753	19981123
	US 2002016288	A1	20020207	US 2001-842104	20010430
	US 2003077334	A1	20030424	US 2001-928243	20010810
PRAI	RU 1998-120753	A	19981123		

US 1999-237801 B2 19990127
US 1999-241232 A1 19990201
OS MARPAT 135:352828
AB The invention provides a composite for the treatment of a variety of medical conditions, the composite comprising an oxidized glutathione-based compd., which has a disulfide bond, and a metal material, in particular where the metal is either platinum or palladium. The oxidized glutathione-based compd. and metal material can be present in a ratio of 3000:1 and preferably 1000:1. The oxidized glutathione-based compd. can be oxidized glutathione itself or salts or derivs thereof. A feature of the invention is that the composite has a more stabilized disulfide bond than the oxidized glutathione-based compd. itself. Methods for prepg. the composite are provided, such methods being beneficial in that the composite is provided in high yields and at high purity. Methods for treating various medical conditions with the composites of the present invention are also disclosed.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Antitumor agents
(**brain**, cerebral **cancer**; oxidized glutathione composites with metal compds., prepn., pharmaceutical compns., and therapeutic use)
IT **Brain**, **neoplasm**
(inhibitors, cerebral **cancer**; oxidized glutathione composites with metal compds., prepn., pharmaceutical compns., and therapeutic use)
IT 7429-90-5, Aluminum, occurrence 7439-89-6, Iron, occurrence 7439-92-1, Lead, occurrence 7439-95-4, Magnesium, occurrence 7439-96-5, Manganese, occurrence 7439-98-7, Molybdenum, occurrence 7440-02-0, Nickel, occurrence 7440-09-7, Potassium, occurrence 7440-22-4, Silver, occurrence 7440-24-6, Strontium, occurrence 7440-32-6, Titanium, occurrence 7440-36-0, Antimony, occurrence 7440-38-2, **Arsenic**, occurrence 7440-39-3, Barium, occurrence 7440-41-7, Beryllium, occurrence 7440-43-9, Cadmium, occurrence 7440-47-3, Chromium, occurrence 7440-48-4, Cobalt, occurrence 7440-50-8, Copper, occurrence 7440-62-2, Vanadium, occurrence 7440-66-6, Zinc, occurrence 7440-70-2, Calcium, occurrence 7782-49-2, Selenium, occurrence
RL: OCU (Occurrence, unclassified); OCCU (Occurrence)
(oxidized glutathione composites with metal compds., prepn., pharmaceutical compns., and therapeutic use)

L8 ANSWER 34 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002010894 EMBASE
TI Retinoid theraphy of childhood cancer.
AU Reynolds C.P.; Lemons R.S.
CS Dr. C.P. Reynolds, Division of Hematology-Oncology, Children's Hosp. of Los Angeles, University of Southern California, 4650 Sunset Boulevard, Los Angeles, CA 90054-0700, United States. preynolds@chla.usc.edu
SO Hematology/Oncology Clinics of North America, (2001) 15/5 (867-910).
Refs: 283
ISSN: 0889-8588 CODEN: HCNAEQ
CY United States
DT Journal; General Review
FS 007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
030 Pharmacology
037 Drug Literature Index
052 Toxicology
LA English
SL English
AB In vitro studies that showed RA could cause growth arrest and differentiation of myelogenous leukemia and **neuroblastoma** led to clinical trials of retinoids in APL and **neuroblastoma** that increased survival for both of those diseases. In the case of APL, ATRA

has been the drug of choice, and preclinical and clinical data support direct combinations of ATRA with cytotoxic chemotherapy. For **neuroblastoma**, a phase I study defined a dose of 13-cis-RA, which was tolerable in patients after myeloablative therapy, and a phase III trial that showed postconsolidation therapy with 13-cis-RA improved EFS for patients with high-risk **neuroblastoma**. Preclinical studies in **neuroblastoma** indicate that ATRA or 13-cis-RA can antagonize cytotoxic chemotherapy and radiation, so use of 13-cis-RA in **neuroblastoma** is limited to maintenance after completion of cytotoxic chemotherapy and radiation. A limitation on the antitumor benefit of ATRA in APL is the marked decrease in drug levels that occurs during therapy as a result of induction of drug metabolism, resulting in a shorter drug half-life and decreased plasma levels. Although early studies sought to overcome the pharmacologic limitations of ATRA therapy in APL, the demonstration that ATO is active against APL in RA-refractory patients(178, 230, 246) has led to a focus on studies employing ATO. Use of 13-cis-RA in **neuroblastoma** has avoided the decreased plasma levels seen with ATRA. It is likely that recurrent disease seen during or after 13-cis-RA therapy in **neuroblastoma** is due to tumor cell resistance to retinoid-mediated differentiation induction. Studies in **neuroblastoma** cell lines resistant to 13-cis-RA and ATRA have shown that they can be sensitive, and in some cases collaterally hypersensitive, to the cytotoxic retinoid fenretinide. Fenretinide induces tumor cell cytotoxicity rather than differentiation, acts independently from RA receptors, and in initial phase I trials has been well tolerated. Clinical trials of fenretinide, alone and in combination with ceramide modulators, are in development.

AB In vitro studies that showed RA could cause growth arrest and differentiation of myelogenous leukemia and **neuroblastoma** led to clinical trials of retinoids in APL and **neuroblastoma** that increased survival for both of those diseases. In the case of APL, ATRA has been the drug of choice, and preclinical and clinical data support direct combinations of ATRA with cytotoxic chemotherapy. For **neuroblastoma**, a phase I study defined a dose of 13-cis-RA, which was tolerable in patients after myeloablative therapy, and a phase III trial that showed postconsolidation therapy with 13-cis-RA improved EFS for patients with high-risk **neuroblastoma**. Preclinical studies in **neuroblastoma** indicate that ATRA or 13-cis-RA can antagonize cytotoxic chemotherapy and radiation, so use of 13-cis-RA in **neuroblastoma** is limited to maintenance after completion of cytotoxic chemotherapy and radiation. A limitation on the antitumor benefit of ATRA in. . . against APL in RA-refractory patients(178, 230, 246) has led to a focus on studies employing ATO. Use of 13-cis-RA in **neuroblastoma** has avoided the decreased plasma levels seen with ATRA. It is likely that recurrent disease seen during or after 13-cis-RA therapy in **neuroblastoma** is due to tumor cell resistance to retinoid-mediated differentiation induction. Studies in **neuroblastoma** cell lines resistant to 13-cis-RA and ATRA have shown that they can be sensitive, and in some cases collaterally hypersensitive,. . .

CT Medical Descriptors:
*childhood cancer: DT, drug therapy
*cancer chemotherapy
*acute myeloblastic leukemia: DT, drug therapy
***neuroblastoma: DT, drug therapy**
treatment outcome
cell differentiation
apoptosis
gene expression
tumor differentiation
transcription regulation
protein protein interaction
protein binding
gene translocation

cell maturation
binding kinetics
binding affinity
enzyme activity
drug blood level
drug safety
drug efficacy
drug. . .
DT, drug therapy
cytarabine: PD, pharmacology
fenretinide: CT, clinical trial
fenretinide: DO, drug dose
fenretinide: DT, drug therapy
fenretinide: TO, drug toxicity
fenretinide: PK, pharmacokinetics
fenretinide: PD, pharmacology
arsenic trioxide: CT, clinical trial
arsenic trioxide: PD, pharmacology
RN. . . AMP responsive element binding protein) 130428-87-4, 130939-96-7; (histone acetyltransferase) 9054-51-7; (daunorubicin) 12707-28-7, 20830-81-3, 23541-50-6; (cytarabine) 147-94-4, 69-74-9; (fenretinide) 65646-68-6, 75686-07-6; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6

L8 ANSWER 35 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2002046791 EMBASE
TI The 20001 guide to oncologic dosing: Part I.
AU Yee G.C.; Valley A.W.
CS G.C. Yee, Department of Pharmacy Practice, College of Pharmacy, University of Nebraska Medical Ctr., Omaha, NE, United States
SO Oncology Spectrums, (2001) 2/9 (657-667).
Refs: 47
ISSN: 1532-8554 CODEN: OENCAH
CY United States
DT Journal; Article
FS 016 Cancer
030 Pharmacology
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
CT Medical Descriptors:
practice . . . lymphoma: DT, drug therapy
prostate cancer: DT, drug therapy
squamous cell carcinoma: DT, drug therapy
Hodgkin disease: DT, drug therapy
pleura effusion: DT, drug therapy
brain cancer: DT, drug therapy
multiple myeloma: DT, drug therapy
nonhodgkin lymphoma: DT, drug therapy
chronic lymphatic leukemia: DT, drug therapy
testis cancer: DT, drug therapy
hairy cell leukemia: DT, drug therapy
neuroblastoma: DT, drug therapy
retinoblastoma: DT, drug therapy
carcinomatous meningitis: DT, drug therapy
human
article
*antineoplastic agent: AE, adverse drug reaction
*antineoplastic agent: CB, drug combination
*antineoplastic agent: DO, drug dose
*antineoplastic agent: DT,. . . drug administration
anastrozole: DO, drug dose
anastrozole: DT, drug therapy
anastrozole: PD, pharmacology

anastrozole: PO, oral drug administration
hormone receptor: EC, endogenous compound
tamoxifen: DT, drug therapy
arsenic trioxide: DO, drug dose
arsenic trioxide: DT, drug therapy
arsenic trioxide: PD, pharmacology
arsenic trioxide: IV, intravenous drug administration
retinoic acid: DT, drug therapy
asparaginase: CB, drug combination
asparaginase: DT, drug therapy
asparaginase: PD, pharmacology
asparaginase: IM, intramuscular drug. . .
RN (recombinant interleukin 2) 110942-02-4; (altretamine) 15468-34-5, 2975-00-0, 645-05-6; (cisplatin) 15663-27-1, 26035-31-4, 96081-74-2; (amifostine) 20537-88-6; (anastrozole) 120511-73-1; (tamoxifen) 10540-29-1; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (retinoic acid) 302-79-4; (asparaginase) 9015-68-3; (prednisone) 53-03-2; (vincristine) 57-22-7; (bexarotene) 153559-49-0; (bicalutamide) 90357-06-5; (gonadorelin) 33515-09-2,. . .

L8 ANSWER 36 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2001238904 EMBASE
TI **Arsenic** poisoning caused by Indian ethnic remedies (Multiple letters) [3].
AU Muzi G.; Dell'Omo M.; Madeo G.; Abbritti G.; Caroli S.
CS Dr. G. Muzi, Inst. of Occup. Med. and Toxicol., University of Perugia, 06100 Perugia, Italy
SO Journal of Pediatrics, (2001) 139/1 (169).
Refs: 7
ISSN: 0022-3476 CODEN: JOPDAB
CY United States
DT Journal; Letter
FS 007 Pediatrics and Pediatric Surgery
017 Public Health, Social Medicine and Epidemiology
037 Drug Literature Index
052 Toxicology
LA English
TI **Arsenic** poisoning caused by Indian ethnic remedies (Multiple letters) [3].
CT Medical Descriptors:
***arsenic poisoning: DI, diagnosis**
***arsenic poisoning: ET, etiology**
*traditional medicine
Indian
polyneuropathy
anorexia
diagnostic error
retinoblastoma: DT, drug therapy
electromyography
human
case report
preschool child
letter
priority journal
***arsenic: DT, drug therapy**
***arsenic: TO, drug toxicity**
creatinine: EC, endogenous compound
RN (**arsenic**) 7440-38-2; (creatinine) 19230-81-0, 60-27-5

L8 ANSWER 37 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2001379020 EMBASE
TI Translational Research Program.
AU Okunieff P.; Hammond M.E.; Grignon D.; Langer C.; Pajak T.F.; Ang K.; Bruner D.W.; Travis E.; Greven K.; Guha A.; Moulder J.; Pollack A.;

Scarantino C.; Sneige N.; Watson J.; Amin M.; Bondy M.; Chakravarti A.; Chapman J.D.; Dicker A.; Harris J.; Koch W.; Komaki R.; Lange C.; McBride W.; Mitchell J.; Milas L.; Movsas B.; Pandya K.; Pienta K.; Regine W.; Ritter M.; Rubin P.; Safran H.; Sauter E.; Schell M.; Stevens C.; Trotti A.; Vikram B.

SO International Journal of Radiation Oncology Biology Physics, (2001) 51/3 SUPPL. 2 (75-87).
Refs: 151
ISSN: 0360-3016 CODEN: IOBPD3

PUI S 0360-3016(01)01786-2

CY United States

DT Journal; General Review

FS 014 Radiology
016 Cancer
037 Drug Literature Index

LA English

CT Medical Descriptors:
***brain cancer: DT, drug therapy**
***brain cancer: RT, radiotherapy**
*head and neck cancer: DT, drug therapy
*head and neck cancer: RT, radiotherapy
*digestive system cancer: DT, drug therapy
*digestive system. . .
drug therapy
3 [(4,5 dimethyl 1h pyrrol 2 yl)methylene] 1,3 dihydro 2h indol 2 one: DT, drug therapy
su 6668: DT, drug therapy
arsenic trioxide: DT, drug therapy
cyclophosphamide: DT, drug therapy
thalidomide: DT, drug therapy
combretastatin: DT, drug therapy
fumagillol chloroacetylcarbamate: DT, drug therapy

RN . . . 54-42-2; (broxuridine) 59-14-3; (3 [(4,5 dimethyl 1h pyrrol 2 yl)methylene] 1,3 dihydro 2h indol 2 one) 186610-95-7; (su 6668) 252916-29-3; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (cyclophosphamide) 50-18-0; (thalidomide) 50-35-1; (combretastatin) 82855-09-2, 89064-44-8; (fumagillol chloroacetylcarbamate) 129298-91-5

L8 ANSWER 38 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 9

AN 2001:825136 CAPLUS

DN 137:41080

TI **Arsenic** compounds as anticancer agents

AU Wang, Zhen-Yi

CS Shanghai Institute of Hematology, Rui-jin Hospital, Shanghai Second Medical University, Shanghai, 200025, Peop. Rep. China

SO Cancer Chemotherapy and Pharmacology (2001), 48(Suppl. 1), S72-S76
CODEN: CCPHDZ; ISSN: 0344-5704

PB Springer-Verlag

DT Journal; General Review

LA English

AB A review, describing the use of **arsenic** compds. as anticancer agents in clin. trials and in vitro. As2O3 treatment of newly diagnosed and relapsed patients with acute promyelocytic leukemia (APL) has been found to result in complete remission (CR) rates of 85-93% when given by i.v. infusion for 2-3 h at 10 mg/day dild. in 5% glucose/saline soln. Patients exhibited a response after 28-42 days. CR rates after administration of Composite Indigo Naturalis tablets contg. **arsenic** sulfide and of pure tetraarsenic tetrasulfide reached 98% and 84.9%, resp. At high concns. (1-2 .mu.M), As2O3 induced apoptosis in various types of cancer cells in vitro, while at lower concns. (0.1-0.5 .mu.M), it triggered cell differentiation. This As2O3-induced apoptosis has been obsd. in many cancer cell lines, including esophageal carcinoma, gastric cancer, **neuroblastoma**, lymphoid malignancies, and

multiple myeloma. Its effectiveness was confirmed in the clin. treatment of multiple myeloma. **Arsenic** compds. are effective agents in the treatment of APL, and their activity against other types of cancer requires further investigation.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI **Arsenic** compounds as anticancer agents

AB A review, describing the use of **arsenic** compds. as anticancer agents in clin. trials and in vitro. As2O3 treatment of newly diagnosed and relapsed patients with acute promyelocytic leukemia (APL) has been found to result in complete remission (CR) rates of 85-93% when given by i.v. infusion for 2-3 h at 10 mg/day dild. in 5% glucose/saline soln. Patients exhibited a response after 28-42 days. CR rates after administration of Composite Indigo Naturalis tablets contg. **arsenic** sulfide and of pure tetraarsenic tetrasulfide reached 98% and 84.9%, resp. At high concns. (1-2 .mu.M), As2O3 induced apoptosis in various types of cancer cells in vitro, while at lower concns. (0.1-0.5 .mu.M), it triggered cell differentiation. This As2O3-induced apoptosis has been obsd. in many cancer cell lines, including esophageal carcinoma, gastric cancer, **neuroblastoma**, lymphoid malignancies, and multiple myeloma. Its effectiveness was confirmed in the clin. treatment of multiple myeloma. **Arsenic** compds. are effective agents in the treatment of APL, and their activity against other types of cancer requires further investigation.

ST review **arsenic** compd antitumor cancer therapy

IT Antitumor agents
Human
(**arsenic** compds. as anticancer agents)

IT Neoplasm
(inhibitors; **arsenic** compds. as anticancer agents)

IT 1327-53-3, **Arsenic** trioxide 7440-38-2D, **Arsenic**, compds.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**arsenic** compds. as anticancer agents)

L8 ANSWER 39 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:790365 CAPLUS
DN 133:355219
TI X-ray guided drug delivery
IN Hallahan, Dennis E.
PA Vanderbilt University, USA
SO PCT Int. Appl., 135 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000066182	A1	20001109	WO 2000-US11485	20000428
	W: AU, CA, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	US 6159443	A	20001212	US 1999-302456	19990429
	EP 1194173	A1	20020410	EP 2000-935839	20000428
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRAI	US 1999-302456	A2	19990429		
	WO 2000-US11485	W	20000428		

AB A method of delivering an active agent to a target tissue, particularly neoplastic tissue, vascular anomaly or tumor tissue, in a vertebrate subject. The method includes the steps of exposing the target tissue to ionizing radiation; and administering a delivery vehicle to the vertebrate subject before, after, during, or combinations thereof, exposing the

target tissue to the ionizing radiation. The delivery vehicle includes the active agent and delivers the agent to the target tissue. Representative delivery vehicles include platelets; leukocytes; proteins or peptides which bind activated platelets; antibodies which bind activated platelets; microspheres coated with proteins or peptides which bind activated platelets; liposomes conjugated to proteins or peptides, platelets, or leukocytes which bind activated platelets, or antibodies which bind activated platelets; and combinations thereof.

RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Alkylating agents, biological
Angiogenesis inhibitors
Antitumor agents
Brain, neoplasm
Chemotherapy
Drug targeting
Genetic vectors
Imaging agents
Radiotherapy
Virus vectors
(X-ray guided drug delivery)

IT 50-18-0, Cyclophosphamide 51-21-8, 5-Fluorouracil 54-62-6, Aminopterin 55-86-7, Nitrogen mustard 59-05-2, Methotrexate 68-76-8, Trenimon 106-51-4D, 1,4-Benzoquinone, derivs. 147-94-4, Cytosine arabinoside 148-82-3, Melphalan 305-03-3, Chlorambucil 443-48-1, Metronidazole 477-30-5, Demecolcine 865-21-4, Vinblastine 1404-00-8, Mitomycin 7440-16-6, Rhodium 103, biological studies 9001-86-9, Phospholipase c 9002-04-4, Thrombin 9002-05-5, Activated blood coagulation factor x 9014-02-2, Neocarzinostatin 10098-91-6, Yttrium 90, biological studies 11056-06-7, Bleomycin 12634-34-3, Macromomycin 13551-87-6, Misonidazole 13981-51-6, Mercury 197, biological studies 14119-24-5, Osmium 191, biological studies 14265-75-9, Lutetium 177, biological studies 14374-81-3, Germanium 71, biological studies 14378-26-8, Rhenium 188, biological studies 14391-11-8, Gold 199, biological studies 14391-19-6, Terbium 161, biological studies 14391-96-9, Scandium 47, biological studies 14596-37-3, Phosphorus 32, biological studies 14683-06-8, Tin 121, biological studies 14687-61-7, **Arsenic** 77, biological studies 14913-49-6, Bismuth 212, biological studies 14914-68-2, Antimony 119, biological studies 14914-76-2, Cesium 131, biological studies 14981-64-7, Palladium 109, biological studies 14981-79-4, Praseodymium 143, biological studies 14998-63-1, Rhenium 186, biological studies 15092-94-1, Lead 212, biological studies 15663-27-1, Cisplatin 15749-66-3, Phosphorus 33, biological studies 15755-39-2, Astatine 211, biological studies 15757-86-5, Copper 67, biological studies 15760-04-0, Silver 111, biological studies 18378-89-7, Mithramycin 20830-81-3, Daunomycin 23109-05-9, .alpha.-Amanitin 23214-92-8, Doxorubicin 33419-42-0, Etoposide 36877-68-6, Nitroimidazole 37316-87-3, Activated blood coagulation factor ix 53643-48-4, Vindesine 65988-88-7, Modeccin 75037-46-6, Gelonin 91933-11-8, Volkensin
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(X-ray guided drug delivery)

L8 ANSWER 40 OF 123 MEDLINE on STN DUPLICATE 10
AN 2000199863 MEDLINE
DN 20199863 PubMed ID: 10737602
TI Microtubule/MAP-affinity regulating kinase (MARK) is activated by phenylarsine oxide in situ and phosphorylates tau within its microtubule-binding domain.
AU Jenkins S M; Johnson G V
CS Department of Psychiatry, University of Alabama at Birmingham, 35294-0017, USA.. gvwj@uab.edu

NC AG06569 (NIA)
P30 CA13148-27 (NCI)
SO JOURNAL OF NEUROCHEMISTRY, (2000 Apr) 74 (4) 1463-8.
Journal code: 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200004
ED Entered STN: 20000421
Last Updated on STN: 20020420
Entered Medline: 20000411
AB Tau is a microtubule-associated protein (MAP) that is functionally modulated by phosphorylation and that is hyperphosphorylated in several neurodegenerative diseases. Because phosphorylation regulates both normal and pathological tau functioning, it is of interest to identify the signaling pathways and enzymes capable of modulating tau phosphorylation in vivo. Previously, it was demonstrated that in SH-SY5Y human **neuroblastoma** cells and rat primary cortical cultures tau is phosphorylated at Ser262/356, within its microtubule-binding domain, by a staurosporine-sensitive protein kinase in response to the vicinal thiol-directed agent phenylarsine oxide. The current study demonstrates the presence of a 100-kDa protein kinase activity in SH-SY5Y cells that associates with microtubules, phosphorylates tau at Ser262/356, is activated by phenylarsine oxide, and is inhibited by the protein kinase inhibitor staurosporine. Isolation of individual protein bands from a polyacrylamide gel revealed two closely spaced proteins containing Ser262/356-directed protein kinase activity. Mass spectrometry analysis indicated that these protein bands correspond to the 100-kDa microtubule/MAP-affinity regulating kinase (MARK), which has been shown previously to phosphorylate tau within its microtubule-binding domain. Immunoblot analysis of the protein kinase bands confirmed this finding, providing the first demonstration that activation of endogenous MARK results in increased tau phosphorylation within its microtubule-binding domain in situ.
AB . . . the signaling pathways and enzymes capable of modulating tau phosphorylation in vivo. Previously, it was demonstrated that in SH-SY5Y human **neuroblastoma** cells and rat primary cortical cultures tau is phosphorylated at Ser262/356, within its microtubule-binding domain, by a staurosporine-sensitive protein kinase. . .
CT Check Tags: Animal; Human; Support, U.S. Gov't, P.H.S.
Antineoplastic Agents, Phytogenic: PD, pharmacology
***Arsenicals: PD, pharmacology**
Binding Sites: PH, physiology
Cerebral Cortex: CY, cytology
Enzyme Activation: DE, drug effects
*Enzyme Inhibitors: PD, pharmacology
Microtubules: DE, drug effects
Microtubules: ME, metabolism
Neuroblastoma
Neurons: CY, cytology
*Neurons: EN, enzymology
Paclitaxel: PD, pharmacology
Phosphorylation
Protein Structure, Tertiary
*Protein-Serine-Threonine Kinases: ME, metabolism
Rats
Serine
. . .
CN 0 (Antineoplastic Agents, Phytogenic); 0 (**Arsenicals**); 0 (Enzyme Inhibitors); 0 (tau Proteins); EC 2.7.1.- (microtubule affinity-regulating kinase, 110-kDa); EC 2.7.1.37 (Protein-Serine-Threonine Kinases)

L8 ANSWER 41 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 2000368049 EMBASE
TI Differentiate or Die: The view from Montreal.
AU Thiele C.J.; Gore S.; Collins S.; Waxman S.; Miller W.
CS C.J. Thiele, National Cancer Institute, Bethesda, MD, United States
SO Cell Death and Differentiation, (2000) 7/10 (1014-1017).
Refs: 1
ISSN: 1350-9047 CODEN: CDDIEK
CY United Kingdom
DT Journal; Conference Article
FS 016 Cancer
029 Clinical Biochemistry
037 Drug Literature Index
038 Adverse Reactions Titles
LA English
CT Medical Descriptors:
*cell differentiation
*cell death
Canada
cancer therapy
cancer cell
cell growth
growth inhibition
signal transduction
cancer survival
acute myeloblastic leukemia
solid tumor
cancer regression
follow up
liver toxicity: SI, side effect
neurotoxicity: SI, side effect
neuroblastoma: DT, drug therapy
prostate cancer: DT, drug therapy
transgene
phenotype
DNA sequence
deacetylation
apoptosis
gene isolation
hybridization
gene induction
gene therapy
DNA methylation
cell transformation
tumor suppressor gene
human
nonhuman
mouse
animal model
controlled study
animal cell
conference paper
priority journal
retinoic acid: CB, drug combination
retinoic acid: DT, drug therapy
retinoid: DT, drug therapy
arsenic trioxide: AE, adverse drug reaction
arsenic trioxide: CB, drug combination
arsenic trioxide: DT, drug therapy
arsenic trioxide: PD, pharmacology
cytotoxic agent: DT, drug therapy
blocking agent: DV, drug development
blocking agent: DT, drug therapy
blocking agent: PD, pharmacology
r 116010: DV,. . . 3,5,5,8,8 pentamethyl 2 naphthyl)ethenyl]benzoic

acid: DT, drug therapy
tamoxifen: IT, drug interaction
tamoxifen: DT, drug therapy
transcription factor: EC, endogenous compound
trichostatin A: PD, pharmacology
interferon
arsenic acid
DNA methyltransferase
hydroxamic acid derivative: PD, pharmacology
suberoylanilide hydroxamic acid: PD, pharmacology
protein inhibitor: PD, pharmacology
trapoxin: PD, pharmacology
fr 901228: PD, pharmacology
ms 275: PD,. . .
RN (retinoic acid) 302-79-4; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (isotretinoin) 4759-48-2; (4 [1 (5,6,7,8 tetrahydro 3,5,5,8,8 pentamethyl 2 naphthyl)ethenyl]benzoic acid) 153559-49-0; (tamoxifen) 10540-29-1; (trichostatin A) 58880-19-6; (**arsenic** acid) 15584-04-0, 7778-39-4; (DNA methyltransferase) 9037-42-7

L8 ANSWER 42 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2000436305 EMBASE
TI [Activities of the committees for orphan medicinal products (COMP)]. AKTIVITATEN DES AUSSCHUSSES FUR 'ORPHAN MEDICINAL PRODUCTS' (COMP).
AU Baddack P.; Throm S.
CS Dr. S. Throm, Verband Forschender Arzneimittel., Leiter Produktion, Qualitiat und Umwelt, Hausvogteiplatz 13, 10117 Berlin, Germany. s.throm@vfa.de
SO Pharmazeutische Industrie, (2000) 62/11 (870).
ISSN: 0031-711X CODEN: PHINAN
CY Germany
DT Journal; (Short Survey)
FS 037 Drug Literature Index
LA German
CT Medical Descriptors:
*treatment indication
glioblastoma: DT, drug therapy
leukemia: DT, drug therapy
Gaucher disease: DT, drug therapy
acute myeloblastic leukemia: DT, drug therapy
erythema nodosum leprosum
short survey
*orphan drug: DT, drug therapy
*gemtuzumab ozogamicin: DT, drug therapy
*1,5 (butylimino) 1,5 didesoxy dextro glucitol: DT, drug therapy
***arsenic trioxide: DT, drug therapy**
fluorouracil: DT, drug therapy
unclassified drug
RN (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (fluorouracil) 51-21-8

L8 ANSWER 43 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 11
AN 2001:316460 CAPLUS
DN 135:266430
TI **Arsenic** trioxide and the growth of human T-cell leukemia virus type I infected T-cell lines
AU Ishitsuka, Kenji; Hanada, Shuichi; Uozumi, Kimiharu; Utsunomiya, Atae; Arima, Terukatsu
CS 2nd Department of Internal Medicine, Faculty of Medicine, Kagoshima University, Kagoshima, Japan
SO Leukemia & Lymphoma (2000), 37(5/6), 649-655
CODEN: LELYEA; ISSN: 1042-8194
PB Harwood Academic Publishers

DT Journal; General Review
LA English
AB A review with 47 refs. A novel therapeutic potential for acute promyelocytic leukemia using **arsenic** trioxide (As2O3) has been reported. Recent in vitro studies demonstrated that As2O3 effectively inhibits the growth of some cell lines derived from patients with malignant lymphoma, chronic lymphocytic leukemia and multiple myeloma. Adult T-cell leukemia (ATL) is an aggressive neoplasm of mature T-cell origin caused by human T-cell leukemia virus type-I (HTLV-I) the prognosis of which still remains very poor. A possible role of As2O3 for the treatment of ATL is demonstrated from evidence that As2O3 significantly inhibits the growth of HTLV-I infected T-cell lines and induces apoptosis in fresh ATL cells at clin. achievable concn. of the agent. The growth inhibition of As2O3 treated HTLV-I infected T-cell lines was induced by both apoptosis and G1 phase accumulation. Cleaved bcl-2 protein and an enhanced expression of bak protein in the cells were coincidentally obsd. during As2O3 treatment. A broad spectrum caspase inhibitor, z-Val-Ala-DL-Asp-fluoromethylketone inhibited the apoptosis induced by As2O3. Increased expression of p53, Cip1/p21 and Kip1/p27, and dephosphorylation of **retinoblastoma** protein (pRb) were detected in the As2O3 treated cells. In conclusion, As2O3 might become a new therapeutic tool in the treatment of ATL as As2O3 induces apoptosis by destruction of the bcl-2 protein and enhancement of the bak protein prodn. to activate caspases, and also induces G1 phase accumulation by enhancement of p53, Cip1/p21, Kip1/p27 and dephosphorylation of pRb.
RE.CNT 47 THERE ARE 47 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI **Arsenic** trioxide and the growth of human T-cell leukemia virus type I infected T-cell lines
AB A review with 47 refs. A novel therapeutic potential for acute promyelocytic leukemia using **arsenic** trioxide (As2O3) has been reported. Recent in vitro studies demonstrated that As2O3 effectively inhibits the growth of some cell lines derived from patients with malignant lymphoma, chronic lymphocytic leukemia and multiple myeloma. Adult T-cell leukemia (ATL) is an aggressive neoplasm of mature T-cell origin caused by human T-cell leukemia virus type-I (HTLV-I) the prognosis of which still remains very poor. A possible role of As2O3 for the treatment of ATL is demonstrated from evidence that As2O3 significantly inhibits the growth of HTLV-I infected T-cell lines and induces apoptosis in fresh ATL cells at clin. achievable concn. of the agent. The growth inhibition of As2O3 treated HTLV-I infected T-cell lines was induced by both apoptosis and G1 phase accumulation. Cleaved bcl-2 protein and an enhanced expression of bak protein in the cells were coincidentally obsd. during As2O3 treatment. A broad spectrum caspase inhibitor, z-Val-Ala-DL-Asp-fluoromethylketone inhibited the apoptosis induced by As2O3. Increased expression of p53, Cip1/p21 and Kip1/p27, and dephosphorylation of **retinoblastoma** protein (pRb) were detected in the As2O3 treated cells. In conclusion, As2O3 might become a new therapeutic tool in the treatment of ATL as As2O3 induces apoptosis by destruction of the bcl-2 protein and enhancement of the bak protein prodn. to activate caspases, and also induces G1 phase accumulation by enhancement of p53, Cip1/p21, Kip1/p27 and dephosphorylation of pRb.
ST review **arsenic** trioxide adult T cell leukemia
IT Proteins, specific or class
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(Bak; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)
IT Interphase (cell cycle)
(G1-phase; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)
IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(Rb, dephosphorylation; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT Antitumor agents
(adult T-cell leukemia; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT p53 (protein)
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(**arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(bcl-2; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT Dephosphorylation, biological
(of pRb; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT Cyclin dependent kinase inhibitors
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(p21CIP1/WAF1; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT Cyclin dependent kinase inhibitors
RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)
(p27KIP1; **arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

IT 1327-53-3, **Arsenic** trioxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**arsenic** trioxide and its mechanism of growth inhibition of human T-cell leukemia virus type I infected T-cell lines)

L8 ANSWER 44 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2000081634 EMBASE
TI [Chemical induced cancers].
CANCERS CHIMIO-INDUITS.
AU Bergeret A.; Normand J.-C.
CS A. Bergeret, Svc. des Maladies Professionnelles, Medecine du Travail, Centre Hospitalier Lyon-Sud, 69495 Pierre-Benite Cedex, France
SO Revue du Praticien, (15 Feb 2000) 50/4 (391-395).
Refs: 6
ISSN: 0035-2640 CODEN: REPRA3
CY France
DT Journal; General Review
FS 016 Cancer
035 Occupational Health and Industrial Medicine
052 Toxicology
LA French
SL English; French
AB Most chemical carcinogenic agents are industrial. About 4% of all cancers have an occupational origin, but the percentage is higher in exposed populations. Evidence of carcinogenicity is provided by epidemiological studies, animal experiments and other biological sources like experimental mutagenesis. The IARC (International Agency for Research on Cancer) classification and the European Union classification of carcinogenic agents for humans are useful for prevention and regulation. Some cancers are classified as occupational diseases but only a few persons receive compensation given the difficulties of aetiologic diagnosis and the frequent absence of declaration.

CT Medical Descriptors:
*occupational toxicology
*occupational carcinogenesis
carcinogenicity
myeloproliferative disorder
leukemia
bladder carcinoma
lung carcinoma
epithelium tumor
paranasal sinus carcinoma
liver sarcoma
angiosarcoma
glioblastoma
human
review
*industrial toxic substance: TO, drug toxicity
*benzene: TO, drug toxicity
*chromic acid: TO, drug toxicity
*aromatic amine: TO, drug toxicity
***arsenic: TO, drug toxicity**
*petroleum derivative: TO, drug toxicity
nickel: TO, drug toxicity
vinyl chloride: TO, drug toxicity
nitrosourea derivative: TO, drug toxicity
nitrosoguanidine: TO, drug. . .
RN (benzene) 71-43-2; (chromic acid) 11104-59-9; (**arsenic**) 7440-38-2; (nickel) 7440-02-0; (vinyl chloride) 75-01-4; (nitrosoguanidine) 674-81-7; (bis(chloromethyl) ether) 542-88-1; (2,3,7,8 tetrachlorodibenzo para dioxin) 1746-01-6

L8 ANSWER 45 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 12
AN 2000:598981 CAPLUS
DN 133:306596
TI Lead and cancer in humans: Where are we now?
AU Steenland, Kyle; Boffetta, Paolo
CS National Institute for Occupational Safety and Health, Cincinnati, OH, 45226, USA
SO American Journal of Industrial Medicine (2000), 38(3), 295-299
CODEN: AJIMD8; ISSN: 0271-3586
PB Wiley-Liss, Inc.
DT Journal
LA English
AB Background. Lead is only weakly mutagenic, but in vitro it inhibits DNA repair and acts synergistically with other mutagens. Lead acetate administered orally, cutaneously, or i.p. causes kidney **cancer**, **brain cancer** (gliomas), and lung **cancer** in rodents, and acts synergistically with other carcinogens. Most cytogenetic studies of exposed workers have shown increases in chromosome aberrations or sister chromatid exchange, including some studies with pos.-exposure response trends. There are 8 studies of cancer mortality or incidence among highly exposed workers; most are cohort studies of lead smelter or battery workers exposed decades ago. Methods. The authors reviewed the epidemol. studies with regard to cancer. Results. These studies provide some evidence of increased risk of lung cancer (RR=1.30, 1.15-1.46, 675 obsd. deaths) and stomach cancer (combined RR=1.34, 1.14-1.57, 181 obsd.). However, the lung cancer findings are not consistent across studies, and confounding by **arsenic** may affect the study with the highest lung cancer RR. Exclusion of that study yields a combined lung cancer RR of 1.14 (1.04-1.73). There is little evidence of increased risk of kidney cancer (combined RR=1.01, 0.72-1.42, 40 obsd.) or **brain cancer** (combined RR=1.06, 0.81-1.40, 69 obsd.). However, 2 studies show a 2-fold increase in kidney cancer, and one study shows a significant excess of gliomas. IARC classified lead as a possible human carcinogen based on sufficient animal data and

insufficient human data in 1987. Six of the 8 studies cited above have been published since 1987. Conclusion. Overall, there is only weak evidence assocg. lead with cancer; the most likely candidates are lung cancer, stomach cancer, and gliomas.

RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB Background. Lead is only weakly mutagenic, but in vitro it inhibits DNA repair and acts synergistically with other mutagens. Lead acetate administered orally, cutaneously, or i.p. causes kidney **cancer**, **brain cancer** (gliomas), and lung **cancer** in rodents, and acts synergistically with other carcinogens. Most cytogenetic studies of exposed workers have shown increases in chromosome aberrations or sister chromatid exchange, including some studies with pos.-exposure response trends. There are 8 studies of cancer mortality or incidence among highly exposed workers; most are cohort studies of lead smelter or battery workers exposed decades ago. Methods. The authors reviewed the epidemol. studies with regard to cancer. Results. These studies provide some evidence of increased risk of lung cancer (RR=1.30, 1.15-1.46, 675 obsd. deaths) and stomach cancer (combined RR=1.34, 1.14-1.57, 181 obsd.). However, the lung cancer findings are not consistent across studies, and confounding by **arsenic** may affect the study with the highest lung cancer RR. Exclusion of that study yields a combined lung cancer RR of 1.14 (1.04-1.73). There is little evidence of increased risk of kidney cancer (combined RR=1.01, 0.72-1.42, 40 obsd.) or **brain cancer** (combined RR=1.06, 0.81-1.40, 69 obsd.). However, 2 studies show a 2-fold increase in kidney cancer, and one study shows a significant excess of gliomas. IARC classified lead as a possible human carcinogen based on sufficient animal data and insufficient human data in 1987. Six of the 8 studies cited above have been published since 1987. Conclusion. Overall, there is only weak evidence assocg. lead with cancer; the most likely candidates are lung cancer, stomach cancer, and gliomas.

L8 ANSWER 46 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:397425 CAPLUS
DN 133:101619
TI A search for trace elements in some human intracranial tumors by instrumental neutron activation analysis
AU Civit, T.; Houdayer, A. J.; Kennedy, G.
CS Service de Neurochirurgie, Centre hospitalier et universitaire de Nancy, Hopital Saint-Julien, Nancy, 54035, Fr.
SO Biological Trace Element Research (2000), 74(3), 203-210
CODEN: BTERDG; ISSN: 0163-4984
PB Humana Press Inc.
DT Journal
LA English
AB A investigation was undertaken to measure the presence of trace elements in some intracranial tumors using the instrumental neutron activation anal. technique. The following 20 minor and trace elements were investigated: Na, Mg, Al, P, Cl, K, Ca, Cr, Mn, Fe, Co, Cu, Zn, As, Se, Br, Rb, Sb, I, and Cs. Our results are compared with other trace element analyses in human brain tissue.

RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ST trace element detn **brain tumor**; neutron activation analysis trace element tumor

IT **Brain**, **neoplasm**
Neutron activation analysis
(trace elements detn. in human intracranial tumors by instrumental neutron activation anal.)

IT 7429-90-5, Aluminum, analysis 7439-89-6, Iron, analysis 7439-95-4, Magnesium, analysis 7439-96-5, Manganese, analysis 7440-09-7, Potassium, analysis 7440-17-7, Rubidium, analysis 7440-23-5, Sodium, analysis 7440-36-0, Antimony, analysis 7440-38-2, **Arsenic**,

analysis 7440-46-2, Cesium, analysis 7440-47-3, Chromium, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 7723-14-0, Phosphorus, analysis 7726-95-6, Bromine, analysis 7782-49-2, Selenium, analysis 14362-44-8, Atomic iodine, analysis 22537-15-1, Atomic chlorine, analysis
RL: ANT (Analyte); ANST (Analytical study)
(trace elements detn. in human intracranial tumors by instrumental neutron activation anal.)

L8 ANSWER 47 OF 123 MEDLINE on STN
AN 2000410634 MEDLINE
DN 20336949 PubMed ID: 10875976
TI Developing new methods for the treatment of **malignant brain tumours**: local delivery of anti-**neoplastic** agents using biodegradable polymers.
AU Olivi A; DiMeco F; Bohan E; Brem H
CS Department of Neurological Surgery, Johns Hopkins University School of Medicine, Baltimore, MD 21205, USA.
NC CA52857 (NCI)
CA62474 (NCI)
SO FORUM, (2000 Apr-Jun) 10 (2) 152-65. Ref: 69
Journal code: 9315183. ISSN: 1121-8142.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 200008
ED Entered STN: 20000907
Last Updated on STN: 20000907
Entered Medline: 20000829
AB Controlled delivery of chemotherapeutic agents by biodegradable polymers is a new strategy that has been added to the **arsenal** available for the treatment of malignant neoplasms. This approach is particularly suitable for the management of **brain tumours** because of the constraints imposed by the blood brain barrier (BBB). The use of polymers for local drug delivery minimises systemic toxicity, while achieving prolonged elevation of intratumoural drug concentrations that results in improved efficacy. In addition, this strategy broadens the spectrum of drugs available for the treatment of **neoplasms** in the **central nervous system** to include agents whose efficacy is significantly limited by systemic toxicity or inability to penetrate the BBB. In this review, we discuss the rationale and background for the use of this novel approach. We also summarise the clinical trials and laboratory investigations leading to the development of local delivery of anti-neoplastic agents from biodegradable polymers for the treatment of malignant gliomas.
TI Developing new methods for the treatment of **malignant brain tumours**: local delivery of anti-**neoplastic** agents using biodegradable polymers.
AB Controlled delivery of chemotherapeutic agents by biodegradable polymers is a new strategy that has been added to the **arsenal** available for the treatment of malignant neoplasms. This approach is particularly suitable for the management of **brain tumours** because of the constraints imposed by the blood brain barrier (BBB). The use of polymers for local drug delivery minimises. . . concentrations that results in improved efficacy. In addition, this strategy broadens the spectrum of drugs available for the treatment of **neoplasms** in the **central nervous system** to include agents whose efficacy is significantly limited by systemic toxicity or inability to penetrate the BBB. In this review,. . .
CT Check Tags: Animal; Human; Support, U.S. Gov't, P.H.S.

*Antineoplastic Agents: AD, administration & dosage
Biodegradation
***Brain Neoplasms: DT, drug therapy**
Delayed-Action Preparations
*Drug Delivery Systems
Drug Evaluation
*Glioma: DT, drug therapy
Microspheres
Polymers

L8 ANSWER 48 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 2001000034 EMBASE
TI A port in the storm for orphans?.
AU Albedo
SO Pharmaceutical Technology Europe, (2000) 12/12 (12+14).
ISSN: 0164-6826 CODEN: PTEUFB
CY United Kingdom
DT Journal; Note
FS 039 Pharmacy
037 Drug Literature Index
025 Hematology
026 Immunology, Serology and Transplantation
008 Neurology and Neurosurgery
036 Health Policy, Economics and Management
LA English
SL English
AB The EU's marketing authorization system for orphan products has received some heavy criticism in an industry survey, which found that recognition is far from mutual. But not all the news is bad: the new orphan drug scheme is working and the industry has won some new support against parallel importing.
CT Medical Descriptors:
*drug legislation
*drug marketing
human
drug manufacture
Fabry disease: DT, drug therapy
promyelocytic leukemia: DT, drug therapy
glioblastoma: DT, drug therapy
acute granulocytic leukemia: DT, drug therapy
wasting syndrome: DT, drug therapy
food and drug administration
drug industry
decision making
drug cost
heart disease: DT,. . . drug therapy
heart disease: DM, disease management
health care cost
drug approval
note
*orphan drug: DT, drug therapy
*orphan drug: PE, pharmacoeconomics
alpha galactosidase: DT, drug therapy
arsenic trioxide: DT, drug therapy
fluorouracil: DT, drug therapy
human growth hormone: DT, drug therapy
nifedipine: DT, drug therapy
nifedipine: PE, pharmacoeconomics
gemtuzumab ozogamicin: DT, drug. . .
RN (alpha galactosidase) 9023-01-2; (**arsenic** trioxide) 1303-24-8, 1327-53-3, 13464-58-9, 15502-74-6; (fluorouracil) 51-21-8; (human growth hormone) 12629-01-5; (nifedipine) 21829-25-4

L8 ANSWER 49 OF 123 CANCERLIT on STN

AN 1999700873 CANCERLIT
DN 99700873
TI A Phase 1 Study of **Arsenic** Trioxide (A<SC>s</SC>[Subscript 2]O[Subscript 3]) in Patients with Solid Tumors (Meeting abstract).
AU Soignet Steve; Calleja Elizabet; Cheung Nai-Kon; Pezzulli Sandr; Vongphrachanh Phothiagat; Spriggs Davi; Warrell Raymond P J
CS Memorial Sloan-Kettering Cancer Center, New York, NY.
SO Proc Annu Meet Am Soc Clin Oncol, (1999) 18 A878.
DT (MEETING ABSTRACTS)
LA English
FS Institute for Cell and Developmental Biology
EM 199910
ED Entered STN: 20000616
Last Updated on STN: 20000616
AB Studies from China and New York have recently documented that daily intravenous doses of A<SC>s</SC>[Subscript 2]O[Subscript 3] are highly effective for remission induction in patients with acute promyelocytic leukemia. Preclinical studies have shown that this agent also has activity against several solid tumor cell lines. To test whether this agent could be clinically useful in a more convenient dosing schedule, we initiated a phase 1 study to determine the safety of A<SC>s</SC>[Subscript 2]O[Subscript 3] administered as a daily IV infusion over 1--2 hours for 5 days every 4 weeks in patients with advanced solid tumors. To date, 13 patients have been enrolled with the following tumor types: **Neuroblastoma** (3), renal cell (2), non-small cell lung (1), thyroid (1), colon (1), stomach (1), ovary (1), esophagus (1), Ewing's sarcoma (1) and Merkel cell (1). The initial dose was 0.15 mg/kg, which has been escalated in successive patient cohorts by 0.05 mg/kg. Blood and urine samples have been analyzed by injection coupled plasma mass spectroscopy. Ten patients are evaluable for toxicity and 6 for response after receiving a median of 2 cycles (range, 1--3). One patient with **neuroblastoma** has had a minor response. Adverse reactions have included fatigue (6), hyperglycemia (7), headache (2), and prolong QTc (2). Patients are currently being entered at a dose of 0.25 mg/kg. Up to this dose, A<SC>s</SC>[Subscript 2]O[Subscript 3] has been well-tolerated, and no patients have required dose attenuation. Since severe reactions have been reported after abrupt dose-escalations, this study will determine the safety and upper limits of tolerability of A<SC>s</SC>[Subscript 2]O[Subscript 3] using a dosing regimen suitable for out-patient therapy of patients with advanced cancer.

TI A Phase 1 Study of **Arsenic** Trioxide (A<SC>s</SC>[Subscript 2]O[Subscript 3]) in Patients with Solid Tumors (Meeting abstract).
AB . . . 4 weeks in patients with advanced solid tumors. To date, 13 patients have been enrolled with the following tumor types: **Neuroblastoma** (3), renal cell (2), non-small cell lung (1), thyroid (1), colon (1), stomach (1), ovary (1), esophagus (1), Ewing's sarcoma. . . are evaluable for toxicity and 6 for response after receiving a median of 2 cycles (range, 1--3). One patient with **neuroblastoma** has had a minor response. Adverse reactions have included fatigue (6), hyperglycemia (7), headache (2), and prolong QTc (2). Patients. . .

L8 ANSWER 50 OF 123 WPIDS
AN 1999-302469 [25] WPIDS
DNC C1999-088639
TI Use of **arsenic** compounds for treatment of solid tumors and metastatic neoplastic disease.
DC B05 B06
IN ELLISON, R M; MERMELSTEIN, F H; ELLISON, R
PA (POLA-N) POLARX BIOPHARMACEUTICALS INC; (ELLI-I) ELLISON R M; (MERM-I) MERMELSTEIN F H
CYC 83
PI WO 9918798 A1 19990422 (199925)* EN 58p

RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL
OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE
GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG
MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG
UZ VN YU ZW

AU 9910893 A 19990503 (199937)
EP 1022951 A1 20000802 (200038) EN
R: AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
NO 2000001977 A 20000613 (200040)
BR 9813085 A 20000822 (200050)
CN 1282218 A 20010131 (200131)
KR 2001015755 A 20010226 (200156)
NZ 503973 A 20010928 (200161)
JP 2001519366 W 20011023 (200202) 52p
MX 2000003653 A1 20010701 (200236)
AU 751932 B 20020829 (200264)
US 2002183385 A1 20021205 (200301)

ADT WO 9918798 A1 WO 1998-US21782 19981015; AU 9910893 A AU 1999-10893 19981015; EP 1022951 A1 EP 1998-953552 19981015, WO 1998-US21782 19981015; NO 2000001977 A WO 1998-US21782 19981015, NO 2000-1977 20000414; BR 9813085 A BR 1998-13085 19981015, WO 1998-US21782 19981015; CN 1282218 A CN 1998-812218 19981015; KR 2001015755 A KR 2000-703973 20000414; NZ 503973 A NZ 1998-503973 19981015, WO 1998-US21782 19981015; JP 2001519366 W WO 1998-US21782 19981015, JP 2000-515442 19981015; MX 2000003653 A1 MX 2000-3653 20000414; AU 751932 B AU 1999-10893 19981015; US 2002183385 A1 Provisional US 1997-62375P 19971015, US 1998-173531 19981015

FDT AU 9910893 A Based on WO 9918798; EP 1022951 A1 Based on WO 9918798; BR 9813085 A Based on WO 9918798; NZ 503973 A Based on WO 9918798; JP 2001519366 W Based on WO 9918798; AU 751932 B Previous Publ. AU 9910893, Based on WO 9918798

PRAI US 1997-62375P 19971015; US 1998-173531 19981015

My Case

AB WO 9918798 A UPAB: 20021105

NOVELTY - Solid tumors or metastatic neoplastic disease or hematopoietic disorders are treated by administration of one or more **arsenic** compounds (I).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) treatment of neoplastic diseases in humans comprising administration of (I) or its salt in combination with at least one other therapeutic agent;

(b) an oral pharmaceutical composition useful for treating neoplastic diseases in a human comprising (I) or its salt and a carrier, diluent or excipient; and

(c) a sterile unit dosage form adapted for parenteral administration comprising a non-lethal amount of **arsenic** trioxide in an aqueous carrier, the dosage form being contained in a sealed glass container.

ACTIVITY - Anticancer.

MECHANISM OF ACTION - Phosphorous analogue able to interfere with signal transduction in apoptosis; inhibitor of angiogenesis.

USE - The method is particularly useful for treatment of tumors of the epithelial tissue, preferably epithelial glands, epithelial ducts, liver, biliary tract, gastrointestinal tract, respiratory tract or urogenital tract, lymphoid tissue, connective tissue, bone or **central nervous system**, metastatic **neoplastic** diseases of the epithelial tissue, lymphoid tissue, connective tissue, bone or **central nervous system**. The **tumor** is preferably a squamous cell carcinoma of the esophagus, adenocarcinoma of esophagus, colorectal carcinoma, gastric carcinoma, Hodgkins lymphoma, non-Hodgkin's lymphoma, follicular lymphoma, diffuse lymphoma, lymphoblastic lymphoma, large cell lymphoma, small lymphocytic lymphoma, **neuroblastoma**, **retinoblastoma**, **glioblastoma** or **oligodendroglioma** (all claimed).

The compounds are also useful for the treatment of metastatic neoplastic diseases, e.g. primary and metastatic **tumors** of the **central nervous system**, refractory primary and metastatic **tumors** of the **central nervous system**, breast, lung, bladder and prostate **cancer** and refractory breast, lung, bladder and prostate cancer.

DESCRIPTION OF DRAWING(S) - The figure is a dose response curve for leukemic cell lines CCRF-CEM, HL-60(TB), K-562, MOLT-4, RPMI-8226 and SR after continuous exposure to 10-5 to 10-9 mu g/ml **arsenic** trioxide for 2 days.

Dwg.1a/4

TI Use of **arsenic** compounds for treatment of solid tumors and metastatic neoplastic disease.

AB . . . 20021105

NOVELTY - Solid tumors or metastatic neoplastic disease or hematopoietic disorders are treated by administration of one or more **arsenic** compounds (I).

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are included for the following:

(a) treatment of neoplastic diseases in humans. . . carrier, diluent or excipient; and

(c) a sterile unit dosage form adapted for parenteral administration comprising a non-lethal amount of **arsenic** trioxide in an aqueous carrier, the dosage form being contained in a sealed glass container.

ACTIVITY - Anticancer.

MECHANISM OF. . . epithelial glands, epithelial ducts, liver, biliary tract, gastrointestinal tract, respiratory tract or urogenital tract, lymphoid tissue, connective tissue, bone or **central nervous system**, metastatic **neoplastic** diseases of the epithelial tissue, lymphoid tissue, connective tissue, bone or **central nervous system**. The **tumor** is preferably a squamous cell carcinoma of the esophagus, adenocarcinoma of esophagus, colorectal carcinoma, gastric carcinoma, Hodgkins lymphoma, non-Hodgkin's lymphoma, follicular lymphoma, diffuse lymphoma, lymphoblastic lymphoma, large cell lymphoma, small lymphocytic lymphoma, **neuroblastoma**, **retinoblastoma**, **glioblastoma** or **oligodendroglioma** (all claimed).

The compounds are also useful for the treatment of metastatic neoplastic diseases, e.g. primary and metastatic **tumors** of the **central nervous system**, refractory primary and metastatic **tumors** of the **central nervous system**, breast, lung, bladder and prostate **cancer** and refractory breast, lung, bladder and prostate cancer.

DESCRIPTION OF DRAWING(S) - The figure is a dose response curve. . . for leukemic cell lines CCRF-CEM, HL-60(TB), K-562, MOLT-4, RPMI-8226 and SR after continuous exposure to 10-5 to 10-9 mu g/ml **arsenic** trioxide for 2 days.

Dwg.1a/4

TECH UPTX: 19990630

TECHNOLOGY FOCUS - INORGANIC CHEMISTRY - Preferred Materials: The **arsenic** compound is an ionic aqueous solution of **arsenic** , **arsenic** trioxide or Fowler's solution.

TECHNOLOGY FOCUS - PHARMACEUTICALS - Preferred Therapeutic Agent: The therapeutic agent other than **arsenic** is a chemotherapeutic or radiotherapeutic agent, preferably etoposide, cisplatin, carboplatin, estramustine phosphate, vinblastine, methotrexate, hydroxyurea, cyclophosphamide, doxorubicin, 5-fluorouracil, taxol, diethylstilbestol,. . .

TT TT: **ARSENIC** COMPOUND TREAT SOLID TUMOUR METASTASIS NEOPLASMS DISEASE.

L8 ANSWER 51 OF 123 MEDLINE on STN

AN 1999276109 MEDLINE

DN 99276109 PubMed ID: 10348353
TI Altered expression of the MYCN oncogene modulates MRP gene expression and response to cytotoxic drugs in **neuroblastoma** cells.
AU Haber M; Bordow S B; Gilbert J; Madafiglio J; Kavallaris M; Marshall G M; Mechetner E B; Fruehauf J P; Tee L; Cohn S L; Salwen H; Schmidt M L; Norris M D
CS Children's Cancer Research Institute, Sydney Children's Hospital, Australia.
SO ONCOGENE, (1999 Apr 29) 18 (17) 2777-82.
Journal code: 8711562. ISSN: 0950-9232.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990628
Last Updated on STN: 19990628
Entered Medline: 19990616
AB We have recently shown a close correlation between expression of the Multidrug Resistance-associated Protein (MRP) gene and the MYCN oncogene and provided evidence that high MRP expression is a powerful independent predictor of poor outcome in **neuroblastoma** (Norris et al., New Engl. J. Med., 334, 231-238, 1996). The effect of MYCN down-regulation on MRP expression and response to cytotoxic drugs was investigated in NBL-S **neuroblastoma** cells transfected with MYCN antisense RNA constructs. Concomitant with MYCN down-regulation, the level of MRP expression was decreased in the NBAS-4 and NBAS-5 antisense transfectants. These cells demonstrated significantly increased sensitivity to the high affinity MRP substrates vincristine, doxorubicin, sodium **arsenate** and potassium antimony tartrate, but not to the poor MRP substrates, taxol or cisplatin. Similarly, transfection of full-length MYCN cDNA into SH-EP **neuroblastoma** cells resulted in increased MRP expression and significantly increased resistance specifically to MRP substrates. The results provide evidence for the MYCN oncogene influencing cytotoxic drug response via regulation of MRP gene expression. Our data also provide a link between the malignant and chemoresistant phenotypes of this childhood malignancy.
TI Altered expression of the MYCN oncogene modulates MRP gene expression and response to cytotoxic drugs in **neuroblastoma** cells.
AB . . . and the MYCN oncogene and provided evidence that high MRP expression is a powerful independent predictor of poor outcome in **neuroblastoma** (Norris et al., New Engl. J. Med., 334, 231-238, 1996). The effect of MYCN down-regulation on MRP expression and response to cytotoxic drugs was investigated in NBL-S **neuroblastoma** cells transfected with MYCN antisense RNA constructs. Concomitant with MYCN down-regulation, the level of MRP expression was decreased in the. . . NBAS-4 and NBAS-5 antisense transfectants. These cells demonstrated significantly increased sensitivity to the high affinity MRP substrates vincristine, doxorubicin, sodium **arsenate** and potassium antimony tartrate, but not to the poor MRP substrates, taxol or cisplatin. Similarly, transfection of full-length MYCN cDNA into SH-EP **neuroblastoma** cells resulted in increased MRP expression and significantly increased resistance specifically to MRP substrates. The results provide evidence for the. . .
CT . . .
Resistance, Multiple: GE, genetics
Drug Resistance, Neoplasm: GE, genetics
*Gene Expression Regulation, Neoplastic: PH, physiology
*Genes, MDR
Multidrug Resistance-Associated Proteins
***Neuroblastoma: DT, drug therapy**
Neuroblastoma: GE, genetics
*Oncogenes
Treatment Outcome

Tumor Cells, Cultured

L8 ANSWER 52 OF 123 MEDLINE on STN DUPLICATE 13
AN 2000005443 MEDLINE
DN 20005443 PubMed ID: 10537051
TI Attenuation of focal adhesion kinase signaling following depletion of agonist-sensitive pools of phosphatidylinositol 4,5-bisphosphate.
AU Linseman D A; Sorensen S D; Fisher S K
CS Department of Pharmacology and Neuroscience Laboratory, Mental Health Research Institute, University of Michigan, Ann Arbor 48104-1687, USA.
NC MH12193F31 (NIMH)
MH46252 (NIMH)
NS23831 (NINDS)
+
SO JOURNAL OF NEUROCHEMISTRY, (1999 Nov) 73 (5) 1933-44.
Journal code: 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000204
Entered Medline: 19991105
AB The effect of phosphoinositide depletion on focal adhesion kinase (FAK) signaling was investigated in two neuronal cell lines. Treatment of either SH-SY5Y **neuroblastoma** cells or PC12 cells with wortmannin, at a concentration that inhibits phosphatidylinositol 4-kinase activity, led to a selective depletion of phosphatidylinositol 4-phosphate without significantly altering phosphatidylinositol 4,5-bisphosphate (PIP2) content. An enhanced tyrosine phosphorylation of FAK elicited by agonist occupancy of phospholipase C-coupled receptors (muscarinic cholinergic in SH-SY5Y **neuroblastoma** or bradykinin in PC12 cells) was blocked completely by wortmannin. Under the above conditions, phosphoinositide resynthesis was prevented, and as a consequence, receptor stimulation led to a marked depletion of PIP2. In contrast, the increased tyrosine phosphorylation of FAK elicited by agents that do not activate phospholipase C (phenylarsine oxide, lysophosphatidic acid, or phorbol ester) persisted in the presence of wortmannin. However, the ability of these agents to elicit an increase in FAK phosphorylation was also prevented if PIP2 was depleted by activation of a phospholipase C-coupled receptor in the presence of wortmannin. The results suggest that agonist-sensitive pools of PIP2 must be maintained for FAK signaling to occur in response to a mechanistically diverse range of stimuli.
AB . . . of phosphoinositide depletion on focal adhesion kinase (FAK) signaling was investigated in two neuronal cell lines. Treatment of either SH-SY5Y **neuroblastoma** cells or PC12 cells with wortmannin, at a concentration that inhibits phosphatidylinositol 4-kinase activity, led to a selective depletion of. . . (PIP2) content. An enhanced tyrosine phosphorylation of FAK elicited by agonist occupancy of phospholipase C-coupled receptors (muscarinic cholinergic in SH-SY5Y **neuroblastoma** or bradykinin in PC12 cells) was blocked completely by wortmannin. Under the above conditions, phosphoinositide resynthesis was prevented, and as. . .
CT . . . Tags: Animal; Human; Support, U.S. Gov't, P.H.S.
1-Phosphatidylinositol 3-Kinase: AI, antagonists & inhibitors
1-Phosphatidylinositol 3-Kinase: ME, metabolism
Androstadienes: PD, pharmacology
Arsenicals: PD, pharmacology
*Cell Adhesion Molecules: ME, metabolism
Enzyme Inhibitors: PD, pharmacology
Lysophospholipids: PD, pharmacology
Myosin-Light-Chain Kinase: AI, antagonists & inhibitors
Myosin-Light-Chain Kinase: ME, metabolism

Neuroblastoma: ME, metabolism
PC12 Cells
*Phosphatidylinositol 4,5-Diphosphate: ME, metabolism
Phosphotyrosine: ME, metabolism
*Protein-Tyrosine Kinase: ME, metabolism
Protein-Tyrosine-Phosphatase: AI, antagonists &. . .
CN 0 (Androstadienes); 0 (**Arsenicals**); 0 (Cell Adhesion Molecules); 0 (Enzyme Inhibitors); 0 (Lysophospholipids); 0 (Phosphatidylinositol 4,5-Diphosphate); 0 (Receptors, Cholinergic); EC 2.7.1.- (endogenous substrate pp120);. . .

L8 ANSWER 53 OF 123 MEDLINE on STN DUPLICATE 14
AN 2000005434 MEDLINE
DN 20005434 PubMed ID: 10537042
TI Modulation of tau phosphorylation within its microtubule-binding domain by cellular thiols.
AU Jenkins S M; Johnson G V
CS Department of Psychiatry, University of Alabama at Birmingham, 35294-0017, USA.
NC AG06569 (NIA)
SO JOURNAL OF NEUROCHEMISTRY, (1999 Nov) 73 (5) 1843-50.
Journal code: 2985190R. ISSN: 0022-3042.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199911
ED Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991105
AB Tau is a microtubule-stabilizing protein that is functionally modulated by alterations in its phosphorylation state. Because phosphorylation regulates both normal and pathological tau functioning, it is of importance to identify the signaling pathways that regulate tau phosphorylation in vivo. The present study examined changes in tau phosphorylation and function in response to modulation of cellular thiol content. Treatment of cells with phenylarsine oxide, which reacts with vicinal thiols, selectively increased tau phosphorylation within its microtubule-binding domain, at the non-Ser/Thr-Pro sites Ser262/356, while decreasing tau phosphorylation at Ser/ Thr-Pro sites outside this region. This increase in tau phosphorylation correlated with a decrease in the amount of tau associated with the cytoskeleton and decreased microtubule stability. Phenylarsine oxide-induced tau phosphorylation was inhibited by oxidants and by the protein kinase inhibitor staurosporine. Although staurosporine completely eliminated the increase in tau phosphorylation at Ser262/356, as detected by immunostaining with 12E8, it had a comparatively minor effect on the changes in tau localization induced by phenylarsine oxide. The results suggest that regulation of cellular thiols is important for modulating tau phosphorylation and function in situ. Additionally, although phosphorylation of Ser262/356 decreases tau's interaction with the cytoskeleton, phosphorylation of these residues alone is not sufficient for the phenylarsine oxide-induced changes in tau localization.
CT Check Tags: Animal; Human; Support, U.S. Gov't, P.H.S.
Arsenicals: PD, pharmacology
Binding Sites
Cells, Cultured
Cerebral Cortex: UL, ultrastructure
Cytoskeleton: ME, metabolism
Enzyme Inhibitors: PD, pharmacology
*Microtubules: ME, metabolism
Neuroblastoma
Oxidants: PD, pharmacology
Phosphorylation

Protein Kinases: AI, antagonists & inhibitors
Rats
Rats, Sprague-Dawley
Staurosporine: PD, pharmacology
*Sulfhydryl Compounds: PD,. . .

CN 0 (**Arsenicals**); 0 (Enzyme Inhibitors); 0 (Oxidants); 0 (Sulfhydryl Compounds); 0 (tau Proteins); EC 2.7.1.37 (Protein Kinases)

L8 ANSWER 54 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 15
AN 1999:319602 CAPLUS
DN 131:139056
TI Apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide at clinically achievable concentrations
AU Zhu, Xin-Hua; Shen, Yu-Lei; Jing, Yong-kui; Cai, Xun; Jia, Pei-Ming; Huang, Ying; Tang, Wei; Shi, Gui-Ying; Sun, Yue-Ping; Dai, Jie; Wang, Zhen-Yi; Chen, Sai-Juan; Zhang, Ting-Dong; Waxman, Samuel; Chen, Zhu; Chen, Guo-Qiang
CS Shanghai Institute of Hematology, Rui-Jin Hospital, Shanghai Second Medical University, Shanghai, 200025, Peop. Rep. China
SO Journal of the National Cancer Institute (1999), 91(9), 772-778
CODEN: JNCIEQ; ISSN: 0027-8874
PB Oxford University Press
DT Journal
LA English
AB **Arsenic** trioxide (As2O3) can induce clin. remission in patients with acute promyelocytic leukemia via induction of differentiation and programmed cell death (apoptosis). We investigated the effects of As2O3 on a panel of malignant lymphocytes to det. whether growth-inhibitory and apoptotic effects of As2O3 can be obsd. in these cells at clin. achievable concns. Eight malignant lymphocytic cell lines and primary cultures of lymphocytic leukemia and lymphoma cells were treated with As2O3, with or without dithiothreitol (DTT) or buthionine sulfoximine (BSO) (an inhibitor of glutathione synthesis). Apoptosis was assessed by cell morphol., flow cytometry, annexin V protein level, and terminal deoxynucleotidyl transferase labeling of DNA fragments. Cellular proliferation was detd. by 5-bromo-2'-deoxyuridine incorporation into DNA and flow cytometry and by use of a mitotic arrest assay. Mitochondrial transmembrane potential (.DELTA..psi.m) was measured by means of rhodamine 123 staining and flow cytometry. Protein expression was assessed by western blot anal. or immunofluorescence. Therapeutic concns. of As2O3 (1-2 .mu.M) had dual effects on malignant lymphocytes: 1) inhibition of growth through ATP (ATP) depletion and prolongation of cell cycle time and 2) induction of apoptosis. As2O3-induced apoptosis was preceded by .DELTA..psi.m collapse. DTT antagonized and BSO enhanced As2O3-induced ATP depletion, .DELTA..psi.m collapse, and apoptosis. Caspase-3 activation, usually resulting from .DELTA..psi.m collapse, was not always assocd. with As2O3-induced apoptosis. As2O3 induced PML (promyelocytic leukemia) protein degrdn. but did not modulate expression of cell cycle-related proteins, including cmyc, **retinoblastoma** protein, cyclin-dependent kinase 4, cyclin D1, and p53, or expression of differentiation-related antigens. Substantial growth inhibition and apoptosis without evidence of differentiation were induced in most malignant lymphocytic cells treated with 1-2 .mu.M As2O3. As2O3 may prove useful in the treatment of malignant lymphoproliferative disorders.
RE.CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI Apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide at clinically achievable concentrations
AB **Arsenic** trioxide (As2O3) can induce clin. remission in patients with acute promyelocytic leukemia via induction of differentiation and programmed cell death (apoptosis). We investigated the effects of As2O3 on a panel of malignant lymphocytes to det. whether growth-inhibitory and apoptotic effects of As2O3 can be obsd. in these cells at clin. achievable concns. Eight malignant lymphocytic cell lines and primary cultures of

lymphocytic leukemia and lymphoma cells were treated with As2O3, with or without dithiothreitol (DTT) or buthionine sulfoximine (BSO) (an inhibitor of glutathione synthesis). Apoptosis was assessed by cell morphol., flow cytometry, annexin V protein level, and terminal deoxynucleotidyl transferase labeling of DNA fragments. Cellular proliferation was detd. by 5-bromo-2'-deoxyuridine incorporation into DNA and flow cytometry and by use of a mitotic arrest assay. Mitochondrial transmembrane potential (.DELTA..psi.m) was measured by means of rhodamine 123 staining and flow cytometry. Protein expression was assessed by western blot anal. or immunofluorescence. Therapeutic concns. of As2O3 (1-2 .mu.M) had dual effects on malignant lymphocytes: 1) inhibition of growth through ATP (ATP) depletion and prolongation of cell cycle time and 2) induction of apoptosis. As2O3-induced apoptosis was preceded by .DELTA..psi.m collapse. DTT antagonized and BSO enhanced As2O3-induced ATP depletion, .DELTA..psi.m collapse, and apoptosis. Caspase-3 activation, usually resulting from .DELTA..psi.m collapse, was not always assocd. with As2O3-induced apoptosis. As2O3 induced PML (promyelocytic leukemia) protein degrdn. but did not modulate expression of cell cycle-related proteins, including cmyc, **retinoblastoma** protein, cyclin-dependent kinase 4, cyclin D1, and p53, or expression of differentiation-related antigens. Substantial growth inhibition and apoptosis without evidence of differentiation were induced in most malignant lymphocytic cells treated with 1-2 .mu.M As2O3. As2O3 may prove useful in the treatment of malignant lymphoproliferative disorders.

ST antileukemic **arsenic** trioxide cell cycle apoptosis; malignant lymphocyte apoptosis **arsenic** trioxide antiproliferative; mitochondrial transmembrane potential antileukemic **arsenic** trioxide

IT Cyclins
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(D1; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(Rb; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Apoptosis
Cell cycle
Cytotoxic agents
Mitochondria
(apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT p53 (protein)
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Membrane potential
(biol.; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(c-myc; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(cell cycle-related; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Antigens
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)
(differentiation-related; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Antitumor agents
(leukemia; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Lymphoproliferative disorders
(malignant; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT Proliferation inhibition
(proliferation inhibitors; apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT 1327-53-3, **Arsenic** trioxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

IT 147014-97-9, Cyclin-dependent kinase 4
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(apoptosis and growth inhibition in malignant lymphocytes after treatment with **arsenic** trioxide)

L8 ANSWER 55 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 1999042105 EMBASE

TI Oxidative stress oppositely modulates protein tyrosine phosphorylation stimulated by muscarinic G protein-coupled and epidermal growth factor receptors.

AU Jope R.S.; Song L.; Grimes C.A.; Zhang L.

CS Dr. R.S. Jope, Psychiat./Behavioral Neurobio. Dept., Sparks Center 1057, University of Alabama, Birmingham, AL 35294-0017, United States. jope@uab.edu

SO Journal of Neuroscience Research, (1 Feb 1999) 55/3 (329-340).
Refs: 40
ISSN: 0360-4012 CODEN: JNREDK

CY United States

DT Journal; Article

FS 002 Physiology

LA English

SL English

AB This study's goals were to more fully define the activation of protein tyrosine phosphorylation stimulated by muscarinic receptors, to test if this signaling process is affected by oxidative stress induced by H2O2, and to compare the effects of H2O2 on protein tyrosine phosphorylation activated by epidermal growth factor (EGF) receptors. Experiments used human **neuroblastoma** SH-SY5Y cells which express endogenous M3 muscarinic and EGF receptors. Carbachol induced time-dependent increases in phosphotyrosine immunoreactivity of several protein bands, which were quantitated, and immunoprecipitation was used to identify the adhesion-related proteins focal adhesion kinase, p130Cas/HEF1, and paxillin, and three shc adapter proteins. Carbachol-induced tyrosine phosphorylation of the adhesion-related proteins was mediated by muscarinic receptors, and was inhibited by a src family kinase inhibitor, PP1. That carbachol can activate src family kinases was indicated further by the finding that carbachol induced an increase in tyrosine phosphorylation of p120-src substrate, which was inhibited by PP1. Oxidative stress induced by H2O2 concentration dependently inhibited carbachol-induced tyrosine phosphorylation of each of the adhesion-related proteins. EGF increased the phosphotyrosine immunoreactivity of 180- and 116- kDa proteins, identified as the EGF receptor and Cbl, respectively. In contrast to the results with carbachol, H2O2 potentiated EGF-induced tyrosine phosphorylation. These results demonstrate that muscarinic receptor activation induces previously unrecognized increases in tyrosine

phosphorylation, and that this signaling process is impaired by H2O2, whereas protein tyrosine phosphorylation stimulated by EGF is increased by H2O2. Thus, oxidative stress can oppositely modulate protein tyrosine phosphorylation induced by activation of G protein-coupled and growth factor receptors in the same cells.

AB . . . to compare the effects of H2O2 on protein tyrosine phosphorylation activated by epidermal growth factor (EGF) receptors. Experiments used human **neuroblastoma** SH-SY5Y cells which express endogenous M3 muscarinic and EGF receptors. Carbachol induced time-dependent increases in phosphotyrosine immunoreactivity of several protein. . .

CT Medical Descriptors:
*oxidative stress
*cholinergic activity
protein phosphorylation
receptor upregulation
neuroblastoma cell
immunoreactivity
immunoprecipitation
cell adhesion
signal transduction
human
controlled study
human cell
article
priority journal
*guanine nucleotide binding protein: EC, endogenous compound
*epidermal growth factor receptor: EC, endogenous compound
*muscarinic receptor: EC, endogenous compound
hydrogen peroxide
carbachol
arsenosobenzene
atropine
mecamylamine
1,1 dimethyl 4 phenylpiperazinium iodide
paxillin
phorbol 13 acetate 12 myristate
protein tyrosine kinase inhibitor

RN (hydrogen peroxide) 7722-84-1; (carbachol) 462-58-8, 51-83-2; (**arsenosobenzene**) 637-03-6; (atropine) 51-55-8, 55-48-1; (mecamylamine) 60-40-2, 826-39-1; (1,1 dimethyl 4 phenylpiperazinium iodide) 54-77-3; (paxillin) 165945-21-1; (phorbol 13 acetate 12 myristate). . .

L8 ANSWER 56 OF 123 MEDLINE on STN DUPLICATE 16
AN 2000038161 MEDLINE
DN 20038161 PubMed ID: 10569804
TI Altered actin cytoskeleton and inhibition of matrix metalloproteinase expression by vanadate and phenylarsine oxide, inhibitors of phosphotyrosine phosphatases: modulation of migration and invasion of human malignant glioma cells.
AU Chintala S K; Kyritsis A P; Mohan P M; Mohanam S; Sawaya R; Gokslan Z; Yung W K; Steck P; Uhm J H; Aggarwal B B; Rao J S
CS Department of Neurosurgery, The University of Texas M. D. Anderson Cancer Center, Houston, Texas 77030, USA.
NC CA 56792 (NCI)
SO MOLECULAR CARCINOGENESIS, (1999 Dec) 26 (4) 274-85.
Journal code: 8811105. ISSN: 0899-1987.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199912
ED Entered STN: 20000113

Last Updated on STN: 20000113
Entered Medline: 19991228

AB Cell-matrix interactions exert a profound influence on cell function and behavior. Our earlier observations suggested that disruption of the actin cytoskeleton results in the inhibition of phorbol ester-induced matrix metalloproteinase (MMP)-9 expression. In this study, to understand the role of protein tyrosine phosphatases in matrix metalloproteinase-9 expression, we treated **glioblastoma** cells with vanadate and phenylarsine oxide (PAO), which are inhibitors of protein tyrosine phosphatases. Vanadate and PAO inhibited expression of phorbol ester-induced MMP-9 as well as constitutive expression of matrix metalloproteinase-2 in a dose- and time-dependent fashion. An assay of the activity of phosphotyrosine phosphatase (PTPase) indicated that vanadate-treated cells had reduced PTPase activity compared with that of untreated controls. Vanadate and PAO also inhibited actin polymerization, cell spreading, migration, and invasion of glioma cells. Furthermore, elevated levels of protein tyrosine phosphorylation were observed in vanadate- and PAO-treated cells in both a concentration- and time-dependent fashion and were seen to have an inverse correlation with focal adhesion kinase protein expression. These results suggest that vanadate and PAO inhibited migration and invasion of glioma cells by their effect on the cytoskeleton and inhibition of MMP expression.

AB . . . metalloproteinase (MMP)-9 expression. In this study, to understand the role of protein tyrosine phosphatases in matrix metalloproteinase-9 expression, we treated **glioblastoma** cells with vanadate and phenylarsine oxide (PAO), which are inhibitors of protein tyrosine phosphatases. Vanadate and PAO inhibited expression of. . .

CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
*Actins: DE, drug effects
***Arsenicals: PD, pharmacology**
Cell Adhesion Molecules: GE, genetics
*Cell Movement: DE, drug effects
*Cytoskeleton: DE, drug effects
Enzyme Inhibitors: PD, pharmacology
. . .

CN 0 (Actins); 0 (**Arsenicals**); 0 (Cell Adhesion Molecules); 0 (Enzyme Inhibitors); 0 (Phosphoproteins); 0 (Vanadates); EC 2.7.1.- (endogenous substrate pp120); EC 2.7.1.112 (Protein-Tyrosine Kinase);. .
.

L8 ANSWER 57 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 1999375983 EMBASE
TI Toxic leukoencephalopathy.
AU Filley C.M.
CS C.M. Filley, Behavioral Neurology Section, Department of Neurology, UCHSC B-183, 4200 E. Ninth Ave., Denver, CO 80262, United States
SO Clinical Neuropharmacology, (1999) 22/5 (249-260).
Refs: 73
ISSN: 0362-5664 CODEN: CLNEDB
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
037 Drug Literature Index
038 Adverse Reactions Titles
052 Toxicology
LA English
SL English

AB The white matter of the brain is vulnerable to a wide variety of toxins. Leukoencephalopathy is being increasingly recognized in a number of different patient populations. The detection of early and subtle toxin effects has been facilitated by the advent of magnetic resonance imaging, which offers better resolution of white matter than other neuroimaging

methods. Neuropathologic features of leukoencephalopathy are also becoming more completely elucidated. Injury to white matter has been described from **cranial** irradiation and **cancer** chemotherapeutic drugs, and from a number of other therapeutic agents, drugs of abuse, and environmental toxins. Many patients have reversible leukoencephalopathy, whereas others experience a progressive and irreversible course. Leukoencephalopathy is associated with neurobehavioral manifestations that may be subtle or devastating, and the syndrome of white matter dementia may result. The pathogenesis of toxic leukoencephalopathy remains largely unknown, and treatment is limited in most cases to prevention by avoidance or minimization of the toxin exposure. However, the prognosis for this syndrome may be relatively favorable because of the frequent sparing of axons even when myelin is affected. Toxic leukoencephalopathy is an emerging clinical disorder that presents the opportunity for improving clinical outcomes in a number of patient groups and for achieving a deeper understanding of the role of white matter in cognitive and emotional function.

AB . . . neuroimaging methods. Neuropathologic features of leukoencephalopathy are also becoming more completely elucidated. Injury to white matter has been described from **cranial** irradiation and **cancer** chemotherapeutic drugs, and from a number of other therapeutic agents, drugs of abuse, and environmental toxins. Many patients have reversible. . .

CT Medical Descriptors:
*leukoencephalopathy: . . . .
AE, adverse drug reaction
hexachlorophene: AE, adverse drug reaction
toluene: TO, drug toxicity
alcohol: TO, drug toxicity
diamorphine: TO, drug toxicity
carbon monoxide: TO, drug toxicity
arsenic: TO, drug toxicity
carbon tetrachloride: TO, drug toxicity
folinic acid: DT, drug therapy

RN. . . (interleukin 2) 85898-30-2; (amphotericin b) 1397-89-3, 30652-87-0; (hexachlorophene) 11119-93-0, 70-30-4; (toluene) 108-88-3; (alcohol) 64-17-5; (diamorphine) 1502-95-0, 561-27-3; (carbon monoxide) 630-08-0; (**arsenic**) 7440-38-2; (carbon tetrachloride) 56-23-5; (folinic acid) 58-05-9, 68538-85-2

L8 ANSWER 58 OF 123 MEDLINE on STN DUPLICATE 17
AN 1999227189 MEDLINE
DN 99227189 PubMed ID: 10209234
TI The p21-Ras signal transduction pathway and growth regulation in human high-grade gliomas.
AU Bredel M; Pollack I F
CS Department of Neurosurgery, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA.
NC K08-NS01810 (NINDS)
SO BRAIN RESEARCH. BRAIN RESEARCH REVIEWS, (1999 Apr) 29 (2-3) 232-49. Ref: 257
Journal code: 8908638. ISSN: 0165-0173.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English
FS Priority Journals
EM 199906
ED Entered STN: 19990614
Last Updated on STN: 20000303
Entered Medline: 19990603
AB Deregulated p21-Ras function, as a result of mutation, overexpression or growth factor-induced overactivation, contributes to at least 30% of human

cancer. This article reviews the potential role of the p21-Ras family of GTPases in the regulation of growth of high-grade gliomas and describes how targeting this oncoprotein clinically may provide a novel strategy to counteract glioma proliferation. The application of strategies directed at selectively opposing the deregulated signal transduction pathway of high-grade gliomas may be of potential therapeutic benefit and may offer a whole new **arsenal** of antineoplastic agents to be included in the multimodal treatment of these challenging neoplasms.

AB . . . the deregulated signal transduction pathway of high-grade gliomas may be of potential therapeutic benefit and may offer a whole new **arsenal** of antineoplastic agents to be included in the multimodal treatment of these challenging neoplasms.

CT Check Tags: Animal; Human; Support, Non-U.S. Gov't; Support, U.S. Gov't, P.H.S.
Apoptosis: PH, physiology
***Brain Neoplasms: PA, pathology**
*Glioma: PA, pathology
*Oncogene Protein p21(ras): PH, physiology
*Signal Transduction: PH, physiology

L8 ANSWER 59 OF 123 MEDLINE on STN DUPLICATE 18
AN 1998252881 MEDLINE
DN 98252881 PubMed ID: 9584208
TI A role for a wortmannin-sensitive phosphatidylinositol-4-kinase in the endocytosis of muscarinic cholinergic receptors.
AU Sorensen S D; Linseman D A; McEwen E L; Heacock A M; Fisher S K
CS Department of Pharmacology, University of Michigan, Ann Arbor, Michigan 48104-1687, USA.
NC GM07767 (NIGMS)
MH46252 (NIMH)
NS23831 (NINDS)
SO MOLECULAR PHARMACOLOGY, (1998 May) 53 (5) 827-36.
Journal code: 0035623. ISSN: 0026-895X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199806
ED Entered STN: 19980625
Last Updated on STN: 20021219
Entered Medline: 19980618
AB A role for phosphoinositides in the endocytosis of muscarinic cholinergic receptors (mAChRs) has been investigated via inhibition of the activity of phosphatidylinositol-4-kinase (PI4K). Pretreatment of SH-SY5Y **neuroblastoma** cells with micromolar concentrations of wortmannin (WT), LY-294002, or phenylarsine oxide (PAO), three chemically distinct agents known to inhibit PI4K, resulted in both an inhibition of agonist-induced endocytosis of mAChRs and a selective reduction in the 32P-labeling of phosphatidylinositol-4-phosphate. PAO-mediated inhibition of both receptor endocytosis and phosphoinositide synthesis could be fully reversed by inclusion of the bifunctional thiol 2, 3-dimercaptopropanol. The requirement for phosphoinositide synthesis in mAChR endocytosis was independent of a role for these lipids in the maintenance of the cytoskeleton because disruption of the latter with cytochalasin D, ML-7, or colchicine failed to inhibit receptor internalization. Determination of PI4K activity in subcellular fractions of SH-SY5Y cells indicated that enzyme activity in fractions enriched in endocytic vesicles and cytosol was preferentially inhibited by WT, LY-294002, and PAO, a profile consistent with the subcellular distribution of the 110-kDa beta isoform of PI4K, as determined by Western blot analysis. Activity of PI4Kbeta present in immunoprecipitated cell lysates was inhibited >75% by inclusion of each of the three inhibitors. These results indicate that ongoing

synthesis of phosphoinositides is necessary for mAChR endocytosis and that the activity of a WT-sensitive form of PI4K, such as PI4Kbeta, is required.

AB . . . endocytosis of muscarinic cholinergic receptors (mAChRs) has been investigated via inhibition of the activity of phosphatidylinositol-4-kinase (PI4K). Pretreatment of SH-SY5Y **neuroblastoma** cells with micromolar concentrations of wortmannin (WT), LY-294002, or phenylarsine oxide (PAO), three chemically distinct agents known to inhibit PI4K,. . .

CT Check Tags: Human; Support, U.S. Gov't, P.H.S.
*1-Phosphatidylinositol 4-Kinase: AI, antagonists & inhibitors
*Androstadienes: PD, pharmacology
Arsenicals: PD, pharmacology
Chromones: PD, pharmacology
Cytoskeleton: ME, metabolism
*Endocytosis
*Enzyme Inhibitors: PD, pharmacology
Isoenzymes: AI, antagonists & inhibitors
Isoenzymes:. . .

CN 0 (Androstadienes); 0 (**Arsenicals**); 0 (Chromones); 0 (Enzyme Inhibitors); 0 (Isoenzymes); 0 (Morpholines); 0 (Muscarinic Agonists); 0 (Phosphatidylinositols); 0 (Receptors, Muscarinic); EC 2.7.1.67 (1-Phosphatidylinositol. . .

L8 ANSWER 60 OF 123 MEDLINE on STN DUPLICATE 19
AN 1998104395 MEDLINE
DN 98104395 PubMed ID: 9442313
TI Polymorphism in glutathione S-transferase loci as a risk factor for common cancers.
AU Strange R C; Lear J T; Fryer A A
CS Clinical Biochemistry Research Group, School of Postgraduate Medicine, Keele University, North Staffordshire Hospital, Stoke-on-Trent, England.
SO ARCHIVES OF TOXICOLOGY. SUPPLEMENT, (1998) 20 419-28. Ref: 21
Journal code: 7802567. ISSN: 0171-9750.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS Priority Journals
EM 199803
ED Entered STN: 19980312
Last Updated on STN: 19980312
Entered Medline: 19980304

AB Though a developing body of data indicates polymorphism at GST genes influences cancer susceptibility, it is unclear why a genotype is associated with one cancer but not another. We believe the GST exert a critical role in normal cell house-keeping activities. GSTM1, GSTM3 and GSTT1 influence tumorigenesis because these enzymes utilise the products of UV-induced oxidative stress. Further support for the importance of these genes in the protection of skin from UV comes from studies in systemic lupus erythematosus (Ollier et al, 1996). Thus, GSTM1 null is associated with increased anti-Ro (but not anti-La) antibodies, a phenotype associated with photosensitivity. At present there is no basis for predicting which cancers will be influenced by GST polymorphisms though other studies do indicate that the GSTs are critical in the metabolism of environmental carcinogens. For example, GSTT1 null confers an increased risk of **astrocytoma** (Hand et al, 1996). While **brain tumours** are not clearly associated with environmental pollutants, N-methyl-N-nitrosourea, processed meats and occupation have been implicated. Why GSTT1 but not GSTM1 or GSTM3 influences the risk of **astrocytoma** is unclear. GSTM3 appears a good susceptibility candidate, as some astrocytes demonstrate strong expression (Hand et al, 1996). Susceptibility to squamous cell cancer of

the larynx, a pathology associated with chronic consumption of tobacco and alcohol, is also influenced by allelism at GSTM3 (Jahnke et al, 1996). The roles of CYP2D6 and CYP1A1 are even more unclear, though the finding that systemic agents such as **arsenic** predispose to multiple BCC, suggests that CYP2D6-mediated hepatic detoxification of photosensitizing agents may be important. Importantly, the extent of altered risk conferred by genotypes is generally 2-3 fold and it is necessary to identify which other genes interact with the GST so that haplotypes associated with 10-20 fold increases in risk can be defined.

AB . . . that the GSTs are critical in the metabolism of environmental carcinogens. For example, GSTT1 null confers an increased risk of **astrocytoma** (Hand et al, 1996). While **brain tumours** are not clearly associated with environmental pollutants, N-methyl-N-nitrosourea, processed meats and occupation have been implicated. Why GSTT1 but not GSTM1 or GSTM3 influences the risk of **astrocytoma** is unclear. GSTM3 appears a good susceptibility candidate, as some astrocytes demonstrate strong expression (Hand et al, 1996). Susceptibility to. . . al, 1996). The roles of CYP2D6 and CYP1A1 are even more unclear, though the finding that systemic agents such as **arsenic** predispose to multiple BCC, suggests that CYP2D6-mediated hepatic detoxification of photosensitizing agents may be important. Importantly, the extent of altered. . .

L8 ANSWER 61 OF 123 MEDLINE on STN DUPLICATE 20
AN 1998435784 MEDLINE
DN 98435784 PubMed ID: 9764755
TI Stimulation of the stress-induced expression of stress proteins by curcumin in cultured cells and in rat tissues in vivo.
AU Kato K; Ito H; Kamei K; Iwamoto I
CS Department of Biochemistry, Institute for Developmental Research, Aichi Human Service Center, Kasugai, Japan.
SO CELL STRESS AND CHAPERONES, (1998 Sep) 3 (3) 152-60.
Journal code: 9610925. ISSN: 1355-8145.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199812
ED Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981230

AB Curcumin, a major component of turmeric, a seasoning commonly used in Indian food, and a known antioxidant, anti-inflammatory and anti-carcinogenic agent, is a potent stimulator of the stress-induced expression of Hsp27, alphaB crystallin and Hsp70. When C6 rat glioma cells were exposed to **arsenite** (100 microM for 1 h), CdCl2 (100 microM for 1 h) or heat (42 degrees C for 30 min) in the presence of 3-10 microM curcumin, induction of the synthesis of all three proteins was markedly stimulated, as detected by specific immunoassays, Western blot analysis and Northern blot analysis. A gel mobility shift assay revealed that curcumin prolonged the stress-induced activation of the heat shock element-binding (HSE-binding) activity of heat shock transcription factor (Hsf) in the cultured cells. The stimulatory effect of curcumin on the responses to stress was also observed in BRL-3A rat liver cells and Swiss 3T3 mouse fibroblasts. Induction of Hsp27, alphaB crystallin and Hsp70 in the liver and adrenal glands of heat-stressed (42 degrees C for 20 min) rats was also enhanced by prior injection of curcumin (20 mg/kg body weight). As curcumin is a potent inhibitor of arachidonic acid metabolism, it is suggested that the mechanism of the stimulation by curcumin of the stress responses might be similar to that of salicylate, indomethacin and nordihydroguaiaretic acid.

AB . . . potent stimulator of the stress-induced expression of Hsp27, alphaB crystallin and Hsp70. When C6 rat glioma cells were exposed to **arsenite** (100 microM for 1 h), CdCl2 (100 microM for 1 h) or heat

(42 degrees C for 30 min) in. . .
CT . . .
Cells: DE, drug effects
3T3 Cells: ME, metabolism
Adrenal Glands: DE, drug effects
Adrenal Glands: ME, metabolism
*Antioxidants: PD, pharmacology
Arsenites: TO, toxicity
Brain Neoplasms: PA, pathology
Cells, Cultured
Crystallins: BI, biosynthesis
Crystallins: GE, genetics
*Curcumin: PD, pharmacology
*Gene Expression Regulation: DE, drug. . .
RN **13768-07-5 (sodium arsenite)**; 458-37-7 (Curcumin); 8024-37-1 (turmeric extract)
CN 0 (Antioxidants); 0 (**Arsenites**); 0 (Crystallins); 0 (Heat-Shock Proteins); 0 (Heat-Shock Proteins 70); 0 (Plant Extracts); 0 (RNA, Messenger); 0 (Sodium Compounds)

L8 ANSWER 62 OF 123 MEDLINE on STN
AN 1998139270 MEDLINE
DN 98139270 PubMed ID: 9490316
TI Human **brain tumors** and exposure to metal and non-metal elements: a case-control study.
AU Hadfield M G; Adera T; Smith B; Fortner-Burton C A; Gibb R D; Mumaw V
CS Department of Pathology, Medical College of Virginia/Virginia Commonwealth University, Richmond 23298, USA.
SO JOURNAL OF ENVIRONMENTAL PATHOLOGY, TOXICOLOGY AND ONCOLOGY, (1998) 17 (1) 1-9.
Journal code: 8501420. ISSN: 0731-8898.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199803
ED Entered STN: 19980312
Last Updated on STN: 19980312
Entered Medline: 19980305
AB BACKGROUND: Primary **brain tumors** are among the most deadly of all cancers, with a 1-year survival rate of 52%. Certain elements, such as nickel, cadmium, chromium, **arsenic**, and beryllium, are established carcinogens in other organs. Silicon and titanium are suspected carcinogens and other elements are known to promote or inhibit the rate of tumor growth. Knowledge about the carcinogenicity of these elements in the brain is limited. In this study, we investigated the potential role of these elements as risk factors for human **brain tumors**. METHODS: In a case-control study, we assessed brain biopsies from 12 patients with various types of primary **brain tumors** and in **tumor**-free **brain** tissue from 6 autopsy cases. We used energy-dispersive X-ray analysis (EDX) to determine if there were significant differences in the concentration of the study elements in **tumors** and in control **brains**. RESULTS: In a bivariate analysis, a statistically significant association was observed between the presence of **brain tumors** and the concentrations of silicon ($p = 0.01$), magnesium ($p = 0.01$), and calcium ($p = 0.03$). Zinc was also associated with a borderline significance ($p = 0.05$). No association was observed for nickel ($p = 0.74$). Although the magnitude of the observed association was estimated using multiple logistic regression analyses, the relative risk estimates were imprecise because of insufficient sample size. Further research using a larger sample size is needed to elucidate the role of these elements in human brain carcinogenesis.
TI Human **brain tumors** and exposure to metal and non-metal

elements: a case-control study.

AB BACKGROUND: Primary **brain tumors** are among the most deadly of all cancers, with a 1-year survival rate of 52%. Certain elements, such as nickel, cadmium, chromium, **arsenic**, and beryllium, are established carcinogens in other organs. Silicon and titanium are suspected carcinogens and other elements are known to. . . the brain is limited. In this study, we investigated the potential role of these elements as risk factors for human **brain tumors** . METHODS: In a case-control study, we assessed brain biopsies from 12 patients with various types of primary **brain tumors** and in **tumor**-free **brain** tissue from 6 autopsy cases. We used energy-dispersive X-ray analysis (EDX) to determine if there were significant differences in the concentration of the study elements in **tumors** and in control **brains**. RESULTS: In a bivariate analysis, a statistically significant association was observed between the presence of **brain tumors** and the concentrations of silicon (p = 0.01), magnesium (p = 0.01), and calcium (p = 0.03). Zinc was also. . .

CT Check Tags: Female; Human; Male
Aged
***Brain Neoplasms: CI, chemically induced**
Brain Neoplasms: CH, chemistry
Brain Neoplasms: UL, ultrastructure
Case-Control Studies
*Chlorine: AE, adverse effects
Chlorine: AN, analysis
Electron Probe Microanalysis
Environmental Exposure
*Metals: AE,. . .

L8 ANSWER 63 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1997:594650 CAPLUS
DN 127:259530
TI Use of labeled CCK-B receptor ligands for the detection, localization, and treatment of malignant human tumors
IN Reubi, Jean-Claude
PA Mallinckrodt Medical, Inc., USA; Reubi, Jean-Claude
SO PCT Int. Appl., 61 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9731657	A2	19970904	WO 1997-US3056	19970225
	WO 9731657	A3	19971023		
	W: CA, JP, US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	CA 2247430	AA	19970904	CA 1997-2247430	19970225
	EP 885017	A2	19981223	EP 1997-908751	19970225
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2000506141	T2	20000523	JP 1997-531108	19970225
PRAI	EP 1996-200498		19960227		
	WO 1997-US3056		19970225		

OS MARPAT 127:259530

AB A method is provided for detecting and localizing malignant tumors and their metastases in tissues, which in healthy condition do not contain disturbing quantities of CCK-receptors, in the body of a human being, which comprises (i) administering a compn. comprising, in a quantity sufficient for external imaging, a labeled peptide derived from H-(Xaa)n-(Xbb)m-Tyr-Xcc-Gly-Trp-Xdd-Asp-Phe-R2, or an acid amide thereof, formed between a free amino group of an amino acid moiety and R1COOH, [R1 = C1-3 alkanoyl, arylcarbonyl, aryl-(C1-3)alkanoyl group]; or a lactam

thereof, formed between a free amino group of an amino acid moiety and a free CO2H group of another amino acid moiety; or a conjugate thereof with avidin or biotin; [(Xaa)n = 0-25 amino acid moieties selected from Ala, Leu, Asn, Dpr, Gln, Glu, Ser, Ile, Met, His, Asp, Lys, Gly, Thr, Pro, Pyr, Arg, Tyr, Trp, Val, Phe; m = 0, 1; Xbb = Asp, Dpr, Glu or Pyr, with the proviso that Xbb can only be Pyr when n = 0; Xcc, Xdd = Met, Leu, Nle;; R2 = OH, acetoxy, amino]; and thereupon (ii) subjecting said being to external imaging, by radioactive scanning or by magnetic resonance imaging, to det. the targeted sites in the body. Also provided is a method for the therapeutic treatment of malignant tumors by administration of the above-defined peptide, labeled for this purpose. Further provided are a method for labeling of the peptide compds., a pharmaceutical compn. to be used for detection, a pharmaceutical compn. to be used for therapy, and a kit for prepg. a radiopharmaceutical compn. The ligands of the invention specifically recognize CCK-B receptors. The methodol. of the invention is useful for detection of tumors which are difficult to characterize, e.g. small-cell lung carcinoma and medullary thyroid carcinoma.

IT Meninges
(**meningioma**; labeled CCK-B receptor ligands for detection, localization, and treatment of tumors, and prepn. thereof)

IT 7429-91-6, Dysprosium, biological studies 7439-89-6, Iron, biological studies 7439-96-5, Manganese, biological studies 7440-00-8, Neodymium, biological studies 7440-02-0, Nickel, biological studies 7440-10-0, Praseodymium, biological studies 7440-19-9, Samarium, biological studies 7440-27-9, Terbium, biological studies 7440-47-3, Chromium, biological studies 7440-48-4, Cobalt, biological studies 7440-50-8, Copper, biological studies 7440-52-0, Erbium, biological studies 7440-54-2, Gadolinium, biological studies 7440-60-0, Holmium, biological studies 7440-64-4, Ytterbium, biological studies 10043-49-9, Gold-198, biological studies 10043-66-0, Iodine-131, biological studies 10098-91-6, Yttrium-90, biological studies 13967-64-1, Dysprosium-165, biological studies 13967-65-2, Holmium-166, biological studies 13981-25-4, Copper-64, biological studies 13981-49-2, Tellurium-127, biological studies 14041-42-0, Gadolinium-159, biological studies 14041-44-2, Ytterbium-175, biological studies 14093-04-0, Iron-52, biological studies 14119-09-6, Gallium-67, biological studies 14158-30-6, Iodine-124, biological studies 14158-31-7, Iodine-125, biological studies 14191-64-1, Praseodymium-142, biological studies 14265-75-9, Lutetium-177, biological studies 14269-78-4, Ytterbium-169, biological studies 14276-53-0, Copper-62, biological studies 14378-26-8, Rhenium-188, biological studies 14391-11-8, Gold-199, biological studies 14391-19-6, Terbium-161, biological studies 14391-32-3, Gadolinium-157, biological studies 14392-02-0, Chromium-51, biological studies 14683-06-8, Tin-121, biological studies 14686-69-2, Bromine-82, biological studies 14687-25-3, Lead-203, biological studies 14687-61-7, **Arsenic**-77, biological studies 14809-47-3, Bromine-75, biological studies 14913-89-4, biological studies 14981-64-7, Palladium-109, biological studies 14981-79-4, Praseodymium-143, biological studies 14998-63-1, Rhenium-186, biological studies 15715-08-9, Iodine-123, biological studies 15720-75-9, Thulium-172, biological studies 15750-15-9, Indium-111, biological studies 15755-33-6, **Arsenic**-72, biological studies 15757-14-9, Gallium-68, biological studies 15757-86-5, Copper-67, biological studies 15758-35-7, Ruthenium-97, biological studies 15760-04-0, Silver-111, biological studies 15765-31-8, Promethium-149, biological studies 15765-38-5, Bromine-76, biological studies 15765-39-6, Bromine-77, biological studies 15766-00-4, Samarium-153, biological studies 15766-03-7, Promethium-151, biological studies 15840-13-8, Erbium-169, biological studies
RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(peptide labeled with; labeled CCK-B receptor ligands for detection, localization, and treatment of tumors, and prepn. thereof)

L8 ANSWER 64 OF 123 CANCERLIT on STN
AN 1998639946 CANCERLIT
DN 98639946
TI Down-regulation of the N-myc oncogene modulates expression of the MRP gene and response to cytotoxic drugs (Meeting abstract).
AU Anonymous
CS Children's Cancer Research Institute, Sydney Children's Hospital, Sydney, Australia 2031.
SO Proc Annu Meet Am Assoc Cancer Res, (1997) 38 A2946.
ISSN: 0197-016X.
DT (MEETING ABSTRACTS)
LA English
FS Institute for Cell and Developmental Biology
EM 199809
ED Entered STN: 19980910
Last Updated on STN: 19980910
AB We have recently shown MRP gene expression to be a powerful prognostic marker in **neuroblastoma** and suggested that the N-myc oncogene may regulate expression of this drug resistance gene (NEJM; 334:231 1996). The effect of N-myc down-regulation on MRP expression and response to cytotoxic drugs was investigated in **neuroblastoma** NBL-S cells transfected with N-myc antisense RNA constructs. The level of MRP expression was decreased in two independent antisense clones, as determined by RNA-PCR, Northern analysis and immunofluorescence. In contrast, the level of P-glycoprotein expression was unchanged. Concomitant with MRP down-regulation, both antisense clones demonstrated significantly increased sensitivity to the MRP substrates vincristine, doxorubicin, sodium **arsenate** and potassium antimony tartrate. In contrast, the response of the antisense clones to either Taxol or cisplatin, neither of which are effective MRP substrates, was unchanged. The present results suggest that N-myc can influence cytotoxic drug response via regulation of MRP gene expression, thus providing an explanation for the established association between N-myc gene amplification and poor outcome in **neuroblastoma**.
AB We have recently shown MRP gene expression to be a powerful prognostic marker in **neuroblastoma** and suggested that the N-myc oncogene may regulate expression of this drug resistance gene (NEJM; 334:231 1996). The effect of N-myc down-regulation on MRP expression and response to cytotoxic drugs was investigated in **neuroblastoma** NBL-S cells transfected with N-myc antisense RNA constructs. The level of MRP expression was decreased in two independent antisense clones,. . . was unchanged. Concomitant with MRP down-regulation, both antisense clones demonstrated significantly increased sensitivity to the MRP substrates vincristine, doxorubicin, sodium **arsenate** and potassium antimony tartrate. In contrast, the response of the antisense clones to either Taxol or cisplatin, neither of which. . . of MRP gene expression, thus providing an explanation for the established association between N-myc gene amplification and poor outcome in **neuroblastoma**.

L8 ANSWER 65 OF 123 MEDLINE on STN
AN 1998003001 MEDLINE
DN 98003001 PubMed ID: 9344316
TI The epidemiology of soft tissue sarcoma.
AU Zahm S H; Fraumeni J F Jr
CS Division of Cancer Epidemiology and Genetics, National Cancer Institute, Rockville, MD 20892-7364, USA.
SO SEMINARS IN ONCOLOGY, (1997 Oct) 24 (5) 504-14. Ref: 153
Journal code: 0420432. ISSN: 0093-7754.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LA English

FS Priority Journals; AIDS
EM 199711
ED Entered STN: 19971224
Last Updated on STN: 19971224
Entered Medline: 19971104
AB Soft tissue sarcoma (STS) accounts for approximately 1% of all cancers diagnosed annually in the United States. Population-based data from Connecticut covering the years 1935-1989 have shown an increasing incidence of STS in both genders, with a greater increase among men than women. The recent increase in acquired immune deficiency syndrome-related Kaposi's sarcoma does not explain the upward trend in STS, dating back decades. Etiologic heterogeneity is suggested by epidemiologic variations that have been observed by subsite and cell type. Among the environmental factors associated with STS are external radiation therapy, Thorotrast, **arsenical** pesticides and medications, phenoxyherbicides, dioxin, vinyl chloride, immunosuppressive drugs, alkylating agents, androgen-anabolic steroids, human immunodeficiency virus, and human herpes virus type 8. In addition, STS occurs excessively among persons with certain heritable states including **retinoblastoma**, Li-Fraumeni syndrome, Gardner's syndrome, Werner's syndrome, nevoid basal cell carcinoma syndrome, neurofibromatosis type 1, and some immunodeficiency syndromes. These risk factors account for a minority of STS cases but provide leads for further epidemiologic and interdisciplinary studies into the genetic and environmental determinants of various forms of STS.
AB . . . have been observed by subsite and cell type. Among the environmental factors associated with STS are external radiation therapy, Thorotrast, **arsenical** pesticides and medications, phenoxyherbicides, dioxin, vinyl chloride, immunosuppressive drugs, alkylating agents, androgen-anabolic steroids, human immunodeficiency virus, and human herpes virus type 8. In addition, STS occurs excessively among persons with certain heritable states including **retinoblastoma**, Li-Fraumeni syndrome, Gardner's syndrome, Werner's syndrome, nevoid basal cell carcinoma syndrome, neurofibromatosis type 1, and some immunodeficiency syndromes. These risk. . .

L8 ANSWER 66 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:601735 CAPLUS
DN 125:241962
TI Method for the detection and localization of malignant human tumors
IN Reubi, Jean-Claude
PA Mallinckrodt Medical, Inc., USA
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9623527	A1	19960808	WO 1996-US1291	19960202
	W: CA, JP				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
PRAI	EP 1995-200263		19950203		

OS MARPAT 125:241962
AB The invention relates to a method of detecting and localizing malignant human tumors, including the metastases thereof, in the body of a human being, comprising the steps of: (i) administering to said being a compn. comprising, in a quantity sufficient for external imaging, a labeled peptide selected from the group consisting of pituitary adenylate cyclase-activating polypeptide (PACAP), PACAP-receptor agonists, PACAP-receptor antagonists, PACAP analogs and PACAP derivs.; and thereupon (ii) subjecting said being to external imaging, by radioactive scanning or by magnetic resonance imaging, to det. the targeted sites in the body of said being. The invention further relates to a method for the therapeutic treatment of said malignant human tumors by administration of the

above-defined peptide, labeled for this purpose, a method for labeling of the peptide compds., a pharmaceutical compn. to be used for detection, a pharmaceutical compn. to be used for therapy and to a kit for prepg. a radiopharmaceutical compn.

IT Neuroglia
(neoplasm, **astrocytoma**, radiolabeled peptides for the detection and localization of malignant human tumors)

IT Neuroglia
(neoplasm, **glioblastoma**, radiolabeled peptides for the detection and localization of malignant human tumors)

IT 10043-49-9, Gold 198, biological studies 10043-66-0, Iodine 131, biological studies 10098-91-6, Yttrium 90, biological studies 13967-64-1, Dysprosium 165, biological studies 13967-65-2, Holmium 166, biological studies 13981-25-4, Copper 64, biological studies 13981-49-2, Tellurium 127, biological studies 13981-55-0, Indium 114, biological studies 13981-59-4, Tin 117, biological studies 14041-42-0, Gadolinium 159, biological studies 14041-44-2, Ytterbium 175, biological studies 14092-99-0, Manganese 52, biological studies 14093-04-0, Iron 52, biological studies 14119-08-5, Gallium66, biological studies 14119-09-6, Gallium 67, biological studies 14133-76-7, Technetium 99, biological studies 14158-30-6, Iodine 124, biological studies 14158-31-7, Iodine 125, biological studies 14191-64-1, Praseodymium 142, biological studies 14265-75-9, Lutetium 177, biological studies 14269-78-4, Ytterbium 169, biological studies 14276-53-0, Copper 62, biological studies 14378-26-8, Rhenium 188, biological studies 14391-11-8, Gold 199, biological studies 14391-19-6, Terbium 161, biological studies 14391-32-3, Gadolinium 157, biological studies 14392-02-0, Chromium 51, biological studies 14683-06-8, Tin 121, biological studies 14686-69-2, Bromine 82, biological studies 14687-25-3, Lead-203, biological studies 14687-61-7, **Arsenic** 77, biological studies 14809-47-3, Bromine 75, biological studies 14885-78-0, Indium 113, biological studies 14913-89-4, biological studies 14981-64-7, Palladium 109, biological studies 14981-79-4, Praseodymium 143, biological studies 14998-63-1, Rhenium 186, biological studies 15065-93-7, Terbium 149, biological studies 15715-08-9, Iodine 123, biological studies 15720-75-9, Thulium 172, biological studies 15750-15-9, Indium 111, biological studies 15755-33-6, **Arsenic** 72, biological studies 15757-14-9, Gallium 68, biological studies 15757-86-5, Copper 67, biological studies 15758-35-7, Ruthenium 97, biological studies 15760-04-0, Silver 111, biological studies 15765-31-8, Promethium 149, biological studies 15765-39-6, Bromine 77, biological studies 15766-00-4, Samarium 153, biological studies 15840-13-8, Erbium 169, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(radiolabeled peptides for the detection and localization of malignant human tumors)

L8 ANSWER 67 OF 123 MEDLINE on STN
AN 96434922 MEDLINE
DN 96434922 PubMed ID: 8837808
TI Light-emitting diodes as a light source for intraoperative photodynamic therapy.
AU Schmidt M H; Bajic D M; Reichert K W 2nd; Martin T S; Meyer G A; Whelan H T
CS Department of Neurosurgery, Medical College of Wisconsin, Milwaukee, USA.
SO NEUROSURGERY, (1996 Mar) 38 (3) 552-6; discussion 556-7.
Journal code: 7802914. ISSN: 0148-396X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Space Life Sciences
EM 199612
ED Entered STN: 19970128
Last Updated on STN: 20020124

Entered Medline: 19961209

AB The development of more cost-effective light sources for photodynamic therapy of **brain tumors** would be of benefit for both research and clinical applications. In this study, the use of light-emitting diode arrays for photodynamic therapy of **brain tumors** with Photofrin porfimer sodium was investigated. An inflatable balloon device with a light-emitting diode (LED) tip was constructed. These LEDs are based on the new semiconductor aluminum gallium **arsenide**. They can emit broad-spectrum red light at high power levels with a peak wavelength of 677 nm and a bandwidth of 25 nm. The balloon was inflated with 0.1% intralipid, which served as a light-scattering medium. Measurements of light flux at several points showed a high degree of light dispersion. The spectral emission of this probe was then compared with the absorption spectrum of Photofrin. This analysis showed that the light absorbed by Photofrin with the use of the LED source was 27.5% of that absorbed with the use of the monochromatic 630-nm light. Thus, to achieve an energy light dose equivalent to that of a laser light source, the LED light output must be increased by a factor of 3.63. This need for additional energy is the difference between a 630- and 677-nm absorption of Photofrin. Using the LED probe and the laser balloon adapter, a comparison of brain stem toxicity in canines was conducted. LED and laser light showed the same signs of toxicity at equivalent light energy and Photofrin doses. The maximal tolerated dose of Photofrin was 1.6 mg/kg, using 100 J/cm2 of light energy administered by laser or LED. This study concludes that LEDs are a suitable light source for photodynamic therapy of **brain tumors** with Photofrin. In addition, LEDs have the potential to be highly efficient light sources for second-generation photosensitizers with absorption wavelengths closer to the LED peak emission.

AB The development of more cost-effective light sources for photodynamic therapy of **brain tumors** would be of benefit for both research and clinical applications. In this study, the use of light-emitting diode arrays for photodynamic therapy of **brain tumors** with Photofrin porfimer sodium was investigated. An inflatable balloon device with a light-emitting diode (LED) tip was constructed. These LEDs are based on the new semiconductor aluminum gallium **arsenide**. They can emit broad-spectrum red light at high power levels with a peak wavelength of 677 nm and a bandwidth. . . energy administered by laser or LED. This study concludes that LEDs are a suitable light source for photodynamic therapy of **brain tumors** with Photofrin. In addition, LEDs have the potential to be highly efficient light sources for second-generation photosensitizers with absorption wavelengths. . .

CT Check Tags: Animal
Brain: DE, drug effects
Brain: PA, pathology
*Brain: SU, surgery
Brain Neoplasms: DT, drug therapy
***Brain Neoplasms: SU, surgery**
Chemotherapy, Adjuvant
Combined Modality Therapy
Dogs
Equipment Design
*Hematoporphyrin Photoradiation: IS, instrumentation

L8 ANSWER 68 OF 123 MEDLINE on STN DUPLICATE 21
AN 97016099 MEDLINE
DN 97016099 PubMed ID: 8862736
TI Concentration of rare earth elements, As, and Th in human **brain** and **brain tumors**, determined by neutron activation analysis.
AU Zhuang G; Zhou Y; Lu H; Lu W; Zhou M; Wang Y; Tan M
CS Shanghai Institute of Nuclear Research, LNAT, Academia Sinica, P. R. China.

SO BIOLOGICAL TRACE ELEMENT RESEARCH, (1996 Summer) 53 (1-3) 45-9.
Journal code: 7911509. ISSN: 0163-4984.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199701
ED Entered STN: 19970128
Last Updated on STN: 19970128
Entered Medline: 19970108
AB Toxic elements As and Th, six rare-earth elemental profiles of **brain tumor** tissues from 16 patients of **astrocytomas** (grade I-III), and normal human brain tissues of 18 male, age-matched autopsies serving as controls have been studied by radiochemical neutron activation analysis. P-204 [di(2-ethylhexyl) phosphate] extraction chromatography column was used for group separation of rare-earth element (REE) by one step. Compared with the normal brain tissues, the analytical results showed that the concentrations of Th, La, Ce, Gd, and Lu were significantly higher in tumor tissues ($P < 0.01$ or 0.001). The possible effects of REE on tumor cell were discussed.
TI Concentration of rare earth elements, As, and Th in human **brain** and **brain tumors**, determined by neutron activation analysis.
AB Toxic elements As and Th, six rare-earth elemental profiles of **brain tumor** tissues from 16 patients of **astrocytomas** (grade I-III), and normal human brain tissues of 18 male, age-matched autopsies serving as controls have been studied by radiochemical. . .
CT Check Tags: Comparative Study; Human; Male; Support, Non-U.S. Gov't
Adult
***Arsenic: ME, metabolism**
***Astrocytoma: ME, metabolism**
*Brain: ME, metabolism
***Brain Neoplasms: ME, metabolism**
Middle Age
Neutron Activation Analysis
*Thorium: ME, metabolism
RN 7440-29-1 (Thorium); **7440-38-2 (Arsenic)**

L8 ANSWER 69 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 96257861 EMBASE
DN 1996257861
TI Art glassware and sinonasal cancer: Report of three cases.
AU Battista G.; Bartoli D.; Iaia T.E.; Dini F.; Fiumalbi C.; Giglioli S.; Valiani M.
CS Cattedra di Med. Preventiva dei Lav., Via dei Tufi, 1,53100 Siena, Italy
SO American Journal of Industrial Medicine, (1996) 30/1 (31-35).
ISSN: 0271-3586 CODEN: AJIMD8
CY United States
DT Journal; Article
FS 016 Cancer
017 Public Health, Social Medicine and Epidemiology
035 Occupational Health and Industrial Medicine
LA English
SL English
AB In a multicenter study on the occupational etiology of sinonasal cancer (s.n.c.) carried out in Italy, we collected information about three cases which had arisen among glass workers: an adenocarcinoma, a melanoma, and a squamocellular carcinoma. The three men worked many years as mixers and/or batchers in artistic glass factories in Tuscany (Italy). We propose a possible etiological role of **arsenic** dust.
AB . . . many years as mixers and/or batchers in artistic glass factories in Tuscany (Italy). We propose a possible etiological role of **arsenic** dust.

CT Medical Descriptors:
*dust exposure
*nose cancer: EP, epidemiology
*nose cancer: DI, diagnosis
*silicosis: ET, etiology
*silicosis: DI, diagnosis
adenocarcinoma
adult
aged
article
brain tumor
case report
glass industry
human
male
melanoma
multicenter study
occupational exposure
squamous cell carcinoma
***arsenic**
RN (**arsenic**) 7440-38-2

L8 ANSWER 70 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 22
AN 1995:479872 CAPLUS
DN 122:262818
TI Scrapie prions selectively modify the stress response in **neuroblastoma** cells
AU Tatzelt, Jorg; Zuo, Jianru; Voellmy, Richard; Scott, Michael; Hartl, Ulrich; Prusiner, Stanley B.; Welch, William J.
CS Dep. Neurology, Univ. California, San Francisco, CA, 94143, USA
SO Proceedings of the National Academy of Sciences of the United States of America (1995), 92(7), 2944-8
CODEN: PNASA6; ISSN: 0027-8424
PB National Academy of Sciences
DT Journal
LA English
AB The fundamental event underlying scrapie infection seems to be a conformational change in the prion protein. To investigate proteins that might feature in the conversion of the cellular prion protein (PrPC) into the scrapie isoform (PrPSc), the authors examd. mouse **neuroblastoma** N2a cells for the expression and cellular distribution of heat shock proteins (Hsps), some of which function as mol. chaperones. In scrapie-infected N2a (ScN2a) cells, Hsp72 and Hsp28 were not induced by heat shock, sodium **arsenite**, or an amino acid analog, in contrast to uninfected control N2a cells, while other inducible Hsps were increased by these treatments. Following heat shock of the N2a cells, constitutively expressed Hsp73 was translocated from the cytoplasm into the nucleus and nucleolus. In contrast, the distribution of Hsp73 in ScN2a cells was not altered by heat shock; the discrete cytoplasmic structures contg. Hsp73 were largely resistant to detergent extn. These alterations in the expression and subcellular translocation of specific Hsps in ScN2a cells may reflect the cellular response to the accumulation of PrPSc. Whether any of these Hsps feature in the conversion of PrPC into PrPSc or the pathogenesis of prion diseases remains to be established.
TI Scrapie prions selectively modify the stress response in **neuroblastoma** cells
AB The fundamental event underlying scrapie infection seems to be a conformational change in the prion protein. To investigate proteins that might feature in the conversion of the cellular prion protein (PrPC) into the scrapie isoform (PrPSc), the authors examd. mouse **neuroblastoma** N2a cells for the expression and cellular distribution of heat shock proteins (Hsps), some of which function as mol. chaperones. In scrapie-infected N2a (ScN2a) cells, Hsp72 and Hsp28 were

not induced by heat shock, sodium **arsenite**, or an amino acid analog, in contrast to uninfected control N2a cells, while other inducible Hsps were increased by these treatments. Following heat shock of the N2a cells, constitutively expressed Hsp73 was translocated from the cytoplasm into the nucleus and nucleolus. In contrast, the distribution of Hsp73 in ScN2a cells was not altered by heat shock; the discrete cytoplasmic structures contg. Hsp73 were largely resistant to detergent extn. These alterations in the expression and subcellular translocation of specific Hsps in ScN2a cells may reflect the cellular response to the accumulation of PrPSc. Whether any of these Hsps feature in the conversion of PrPC into PrPSc or the pathogenesis of prion diseases remains to be established.

ST scrapie prion stress protein **neuroblastoma**

IT Stress, biological
(scrapie prions selectively modify stress response in **neuroblastoma** cells)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Hsp 72, scrapie prions selectively modify stress response in **neuroblastoma** cells)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(Hsp 73, scrapie prions selectively modify stress response in **neuroblastoma** cells)

IT Nervous system
(disease, scrapie, scrapie prions selectively modify stress response in **neuroblastoma** cells)

IT Proteins, specific or class
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(hsp 28, scrapie prions selectively modify stress response in **neuroblastoma** cells)

IT Nerve, neoplasm
(**neuroblastoma**, scrapie prions selectively modify stress response in **neuroblastoma** cells)

L8 ANSWER 71 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 95183561 EMBASE

DN 1995183561

TI A primary care plan for neurology.

AU Kurtzke J.F.; Houff S.A.

CS Neurology Service, VA Medical Center, 50 Irving Street, NW,Washington, DC 20422, United States

SO Neurology, (1995) 45/6 (1052-1061).
ISSN: 0028-3878 CODEN: NEURAI

CY United States

DT Journal; General Review

FS 008 Neurology and Neurosurgery
017 Public Health, Social Medicine and Epidemiology
036 Health Policy, Economics and Management

LA English

CT Medical Descriptors:
*neurologic disease
*primary medical care
caregiver
central nervous system disease
central nervous system tumor
disease classification
epilepsy
health care delivery
human
neuromuscular disease
neurotoxicity
priority journal
review

sleep disorder
united states
2 hexanone: TO, drug toxicity
arsenic: TO, drug toxicity
carbaril: TO, drug toxicity
carbon disulfide: TO, drug toxicity
heavy metal: TO, drug toxicity
hexane: TO, drug toxicity
lead: TO, drug toxicity
manganese:. . .

RN (2 hexanone) 591-78-6; (**arsenic**) 7440-38-2; (carbaril) 63-25-2; (carbon disulfide) 67894-22-8, 75-15-0; (hexane) 110-54-3; (lead) 7439-92-1; (manganese) 16397-91-4, 7439-96-5; (tetrachloroethylene) 127-18-4; (tin) 14314-35-3, 7440-31-5; (toluene). . .

L8 ANSWER 72 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:107606 CAPLUS
DN 124:167769
TI Serum **arsenic** and selenium concentrations in hemodialysis patients: Correlations to associated diseases
AU Mayer, Daniel R.; Kosmus, Walter; Beyer, Wolfgang; Pogglitsch, Helmut; Irgolic, Kurt J.
CS Institute Analytical Chemistry, Graz, A-8010, Austria
SO Trace and Toxic Elements in Nutrition and Health, Proceedings of the International Conference on Health and Disease: Effects of Essential and Toxic Trace Elements, 4th, New Delhi, Feb. 8-12, 1993 (1995), Meeting Date 1993, 41-8. Editor(s): Abdulla, Mohammed; Vohora, Shashi B.; Athar, Mohammad. Publisher: Wiley Eastern, New Delhi, India.
CODEN: 62EMAA
DT Conference
LA English
AB **Arsenic** and selenium possess several biol. functions and may act antagonistically. Selenium, essential for man, is an integral part of the enzyme glutathione peroxidase. It is used therapeutically for the treatment of acute pancreatitis and has demonstrated anticarcinogenic effects. **Arsenic** seems to catalyze glutathione biosynthesis and to be involved in the metab. of arginine, membrane phospholipids, and zinc. Hemodialyzed patients often suffer from trace element imbalances. To check their As and Se status, the authors collected sera from patients and healthy subjects. Sera were mineralized and As and Se detd. by hydride generation AAS. The patients had lower serum concns. of As (8.1 ng/mL) than controls (10.5 ng/mL). Selenium concns. (42 ng/mL) were also lower in dialysis patients than in the control group (64 ng/mL). **Cancer**, cardiomyopathy, diabetes, vascular and **central nervous system** (CNS) diseases and diet may cause markedly decreased Se concns. Low As concns. were found only in patients, suffering from CNS-diseases. Comorbid conditions such as high blood pressure and hepatic damages did not correlate with As and Se concns. No definite relations were found between As or Se status and age, sex, wt. or smoking habits. Hemodialysis appears to disturb not only Se but also As homeostasis. As and Se serum levels are influenced by diseases assocd. with hemodialysis. The results suggest that As could play an essential role for man. Se supplementation for dialysis patients should be considered to improve their general health status and to prolong their life.
TI Serum **arsenic** and selenium concentrations in hemodialysis patients: Correlations to associated diseases
AB **Arsenic** and selenium possess several biol. functions and may act antagonistically. Selenium, essential for man, is an integral part of the enzyme glutathione peroxidase. It is used therapeutically for the treatment of acute pancreatitis and has demonstrated anticarcinogenic effects. **Arsenic** seems to catalyze glutathione biosynthesis and to be involved in the metab. of arginine, membrane phospholipids, and zinc. Hemodialyzed patients often suffer from trace element imbalances.

To check their As and Se status, the authors collected sera from patients and healthy subjects. Sera were mineralized and As and Se detd. by hydride generation AAS. The patients had lower serum concns. of As (8.1 ng/mL) than controls (10.5 ng/mL). Selenium concns. (42 ng/mL) were also lower in dialysis patients than in the control group (64 ng/mL). **Cancer**, cardiomyopathy, diabetes, vascular and **central nervous system** (CNS) diseases and diet may cause markedly decreased Se concns. Low As concns. were found only in patients, suffering from CNS-diseases. Comorbid conditions such as high blood pressure and hepatic damages did not correlate with As and Se concns. No definite relations were found between As or Se status and age, sex, wt. or smoking habits. Hemodialysis appears to disturb not only Se but also As homeostasis. As and Se serum levels are influenced by diseases assocd. with hemodialysis. The results suggest that As could play an essential role for man. Se supplementation for dialysis patients should be considered to improve their general health status and to prolong their life.

ST serum **arsenic** selenium hemodialysis patient disease

IT Blood serum
Disease
Sex
(serum **arsenic** and selenium concns. in hemodialysis patients - correlations to assocd. diseases)

IT Dialysis
(hemo-, serum **arsenic** and selenium concns. in hemodialysis patients - correlations to assocd. diseases)

IT 7440-38-2, **Arsenic**, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(serum **arsenic** and selenium concns. in hemodialysis patients - correlations to assocd. diseases)

IT 7782-49-2, Selenium, biological studies
RL: ADV (Adverse effect, including toxicity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(serum **arsenic** and selenium concns. in hemodialysis patients - correlations to assocd. diseases)

L8 ANSWER 73 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 23
AN 1994:5745 CAPLUS
DN 120:5745
TI Coinduction of two low-molecular-weight stress proteins, .alpha.B crystallin and HSP28, by heat or **arsenite** stress in human glioma cells
AU Kato, Kanefusa; Goto, Sachiyo; Hasegawa, Kaori; Inaguma, Yutaka
CS Dep. Biochem., Inst. Dev. Res., Kasugai, 480-03, Japan
SO Journal of Biochemistry (Tokyo, Japan) (1993), 114(5), 640-7
CODEN: JOBIAO; ISSN: 0021-924X
DT Journal
LA English
AB The responses of two low-mol.-wt. stress proteins, .alpha.B crystallin and HSP28, to various types of stress were detd. quant. by specific immunoassays in a human **glioblastoma** cell line (U118 MG). Levels of .alpha.B crystallin (2-4 ng/mg protein) and HSP28 (1-1.5 .mu.g/mg protein) in the sol. fraction from cells that had been cultured at 37.degree. increased about 100-fold and 3-fold, resp., within 24 h after heat treatment for 15 min at 45.degree., with a temporary decrease, due to redistribution to the insol. fraction, during the heat treatment. Exposure of cells to **arsenite** ($NaAsO_2$, 100 .mu.M for 1 h) also induced the two proteins with a time course similar to that obsd. after heat stress, but without a decrease during the stress period. L-Azetidine-2-carboxylate (5 mM for 5 h) was also effective in inducing the two proteins, but to a lesser extent. Other chems., including $CdCl_2$, $ZnCl_2$, $AlCl_3$, ethanol, caffeine, nicotine, NaN_3, dibutyryl 3',5'-cAMP, forskolin, and a phorbol ester, did not induce the two proteins. Expression of .alpha.B crystallin and HSP28 mRNAs in cells was enhanced

after heat stress and after exposure to **arsenite**. When cells were challenged with heat stress in the presence of **arsenite**, the effect on the induction of the two proteins was synergistic. Ethanol (1-2%) enhanced the responses to heat stress or **arsenite** stress. Glycerol (10% or 1.36 M), added to the culture medium during the stress period, completely blocked the expression of the mRNA for .alpha.B crystallin and the induction of the two proteins by heat stress, but not that by **arsenite** stress. These results indicate that the two low-mol.-wt. stress proteins, .alpha.B crystallin and HSP28, respond analogously to heat and chem. stressors in U118 MG cells, but suggest that the events assocd. with activation of the heat shock genes by heat stress are different from those assocd. with the activation by chem. (**arsenite**) stress.

TI Coinduction of two low-molecular-weight stress proteins, .alpha.B crystallin and HSP28, by heat or **arsenite** stress in human glioma cells

AB The responses of two low-mol.-wt. stress proteins, .alpha.B crystallin and HSP28, to various types of stress were detd. quant. by specific immunoassays in a human **glioblastoma** cell line (U118 MG). Levels of .alpha.B crystallin (2-4 ng/mg protein) and HSP28 (1-1.5 .mu.g/mg protein) in the sol. fraction from cells that had been cultured at 37.degree. increased about 100-fold and 3-fold, resp., within 24 h after heat treatment for 15 min at 45.degree., with a temporary decrease, due to redistribution to the insol. fraction, during the heat treatment. Exposure of cells to **arsenite** ($NaAsO_2$, 100 .mu.M for 1 h) also induced the two proteins with a time course similar to that obsd. after heat stress, but without a decrease during the stress period. L-Azetidine-2-carboxylate (5 mM for 5 h) was also effective in inducing the two proteins, but to a lesser extent. Other chems., including $CdCl_2$, $ZnCl_2$, $AlCl_3$, ethanol, caffeine, nicotine, NaN_3, dibutyryl 3',5'-cAMP, forskolin, and a phorbol ester, did not induce the two proteins. Expression of .alpha.B crystallin and HSP28 mRNAs in cells was enhanced after heat stress and after exposure to **arsenite**. When cells were challenged with heat stress in the presence of **arsenite**, the effect on the induction of the two proteins was synergistic. Ethanol (1-2%) enhanced the responses to heat stress or **arsenite** stress. Glycerol (10% or 1.36 M), added to the culture medium during the stress period, completely blocked the expression of the mRNA for .alpha.B crystallin and the induction of the two proteins by heat stress, but not that by **arsenite** stress. These results indicate that the two low-mol.-wt. stress proteins, .alpha.B crystallin and HSP28, respond analogously to heat and chem. stressors in U118 MG cells, but suggest that the events assocd. with activation of the heat shock genes by heat stress are different from those assocd. with the activation by chem. (**arsenite**) stress.

ST heat stress crystallin HSP28 protein induction; **arsenite** crystallin HSP28 protein induction

IT Gene, animal
Ribonucleic acids, messenger
RL: BIOL (Biological study)
(for HSP28 protein and .alpha.B-crystallin, heat- and **arsenite**-stress induction of, in human glioma cell line)

IT Proteins, specific or class
RL: BIOL (Biological study)
(hsp 28, heat- and **arsenite**-stress induction of, in human glioma cell line)

IT Crystallins
RL: BIOL (Biological study)
(.alpha.B-, heat- and **arsenite**-stress induction of, in human glioma cell line)

IT 64-17-5, Ethanol, biological studies
RL: BIOL (Biological study)
(HSP28 protein and .alpha.B-crystallin induction by heat- and **arsenite**-stress enhancement by, in human glioma cell line)

IT 56-81-5, Glycerol, biological studies
RL: BIOL (Biological study)
(HSP28 protein and .alpha.B-crystallin induction by heat- and **arsenite**-stress modulation by, in human glioma cell line)
IT 2133-34-8, L-Azetidine-2-carboxylic acid 15502-74-6, **Arsenite**
RL: BIOL (Biological study)
(HSP28 protein and .alpha.B-crystallin induction by, in human glioma cell line)

L8 ANSWER 74 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 24
AN 1993:99321 CAPLUS
DN 118:99321
TI Enhanced production of morbillivirus gene-specific RNAs following induction of the cellular stress response in stable persistent infection
AU Oglesbee, Michael J.; Kenney, Hai; Kenney, Tacy; Krakowka, Steven
CS Dep. Vet. Pathobiol., Ohio State Univ., Columbus, OH, 43210, USA
SO Virology (1993), 192(2), 556-67
CODEN: VIRLAX; ISSN: 0042-6822
DT Journal
LA English
AB The major inducible .apprx.70 kDa heat shock proteins (i.e., 72 kDa HSP) are incorporated into the biol. active light nucleocapsid (L-NC) variant of canine distemper virus (CDV). In vitro induction of the cellular stress response, characterized by elevated cytoplasmic and intranuclear 72 kDa HSP, enhanced the L-NC expression in mink lung cells supporting stable persistent infection by raccoon-origin CDV. Increases in L-NC correlated with the increased viral RNA prodn. in cell-free transcriptional assays. The enhanced prodn. of viral transcripts within infected cells following stress response induction was confirmed by slot blot and Northern blot anal. of total cellular RNA and was reflected in increased total viral protein prodn. Post-shock increases in viral fusion (F) gene transcripts and F protein were assocd. with dramatic increases in viral cytopathic effect. A modest induction of cell-free infectious viral progeny was also documented. A similar effect of the cellular stress response upon viral protein expression, cytopathic effect, and cell-free infectious progeny release was demonstrated in murine **neuroblastoma** cells persistently infected with a canine CDV isolate. Alterations of the persistent viral phenotype were independent of the specific mechanism of stress-response induction (heat or sodium **arsenite**), supporting the role of the stress response and not of a particular stressor in mediating these changes. The results document the ability of the cellular environment to alter persistent viral RNA metab., thereby altering the infection phenotype.
AB The major inducible .apprx.70 kDa heat shock proteins (i.e., 72 kDa HSP) are incorporated into the biol. active light nucleocapsid (L-NC) variant of canine distemper virus (CDV). In vitro induction of the cellular stress response, characterized by elevated cytoplasmic and intranuclear 72 kDa HSP, enhanced the L-NC expression in mink lung cells supporting stable persistent infection by raccoon-origin CDV. Increases in L-NC correlated with the increased viral RNA prodn. in cell-free transcriptional assays. The enhanced prodn. of viral transcripts within infected cells following stress response induction was confirmed by slot blot and Northern blot anal. of total cellular RNA and was reflected in increased total viral protein prodn. Post-shock increases in viral fusion (F) gene transcripts and F protein were assocd. with dramatic increases in viral cytopathic effect. A modest induction of cell-free infectious viral progeny was also documented. A similar effect of the cellular stress response upon viral protein expression, cytopathic effect, and cell-free infectious progeny release was demonstrated in murine **neuroblastoma** cells persistently infected with a canine CDV isolate. Alterations of the persistent viral phenotype were independent of the specific mechanism of stress-response induction (heat or sodium **arsenite**), supporting the role of the stress response and not of a particular stressor in mediating these changes. The results document the ability of the cellular

environment to alter persistent viral RNA metab., thereby altering the infection phenotype.

L8 ANSWER 75 OF 123 CANCERLIT on STN
AN 93690069 CANCERLIT
DN 93690069
TI Epidemiologic studies of health hazards related to the Swedish art glass industry.
AU Wingren G B
CS Universitetet I Linkoping, Sweden.
SO Diss Abstr Int [C], (1992) 53 (4) 716.
ISSN: 0419-4217.
DT (THESIS)
LA English
FS Institute for Cell and Developmental Biology
EM 199304
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB Workers in the Swedish art glass industry are exposed to a variety of hazardous chemicals, some of which are known carcinogens. Most of these substances are components of the glass batch (ie, the mixture of substances used to make glass; eg, compounds of **arsenic**, antimony, lead, cadmium, chromium, and nickel). Furthermore, large amounts of hydrofluoric acid and sulfuric acid are used in the polishing process and, in the past, equipment made of asbestos was used for handling hot glass. Many of these chemicals are found not only within the glassworks themselves, but have also been emitted to the environment, causing general concerns about health hazards among people living in the vicinity of glassworks. Some glass workers are also exposed to combustion products and constant heat stress when working close to the glass furnaces. The present studies show that Swedish art glass workers run increased risks of dying from cancer of the stomach, colon and lung and from cardiovascular diseases. In one of the studies, increased risks were also observed for prostate and pharynx cancer and for cerebrovascular diseases. The worker category showing the highest cancer risks was the glass blowers. The exposure route for this category of workers might be through both inhalation of airborne substances and ingestion of particles entering the mouth by way of the blowpipe. These possibilities are supported by hygienic measurements, including analysis of slag samples from inside the blowpipes. The present studies were initiated due to concern about cancer risks expressed by people living close to glassworks, but the only increased risk found in this population was a cluster of **brain cancers**. Glass workers represent a large part of the population living in the vicinity of the glassworks, where the cluster of **brain cancers** occurred, and because of this, registry-based studies of Swedish glass workers seem to have spuriously indicated an occupational risk in this respect. Although the detected cluster of **brain cancers** might have its origin in some industrial discharge from the glassworks, the chemicals predominating in the emissions are not known to cause **brain cancers**, and other factors might be involved as well. (Abstract shortened by University Microfilms International)
AB . . . these substances are components of the glass batch (ie, the mixture of substances used to make glass; eg, compounds of **arsenic** , antimony, lead, cadmium, chromium, and nickel). Furthermore, large amounts of hydrofluoric acid and sulfuric acid are used in the polishing. . . expressed by people living close to glassworks, but the only increased risk found in this population was a cluster of **brain cancers**. Glass workers represent a large part of the population living in the vicinity of the glassworks, where the cluster of **brain cancers** occurred, and because of this, registry-based studies of Swedish glass workers seem to have spuriously indicated an occupational risk in this respect. Although the detected cluster of **brain cancers** might have its origin in some

industrial discharge from the glassworks, the chemicals predominating in the emissions are not known to cause **brain cancers**, and other factors might be involved as well. (Abstract shortened by University Microfilms International)

L8 ANSWER 76 OF 123 MEDLINE on STN
AN 92241015 MEDLINE
DN 92241015 PubMed ID: 1572205
TI Heme oxygenase: expression in human retina and modulation by stress agents in a human **retinoblastoma** cell model system.
AU Kutty G; Hayden B; Osawa Y; Wiggert B; Chader G J; Kutty R K
CS Laboratory of Retinal Cell and Molecular Biology, National Eye Institute, National Institutes of Health, Bethesda, MD 20892.
SO CURRENT EYE RESEARCH, (1992 Feb) 11 (2) 153-60.
Journal code: 8104312. ISSN: 0271-3683.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199206
ED Entered STN: 19920619
Last Updated on STN: 19980206
Entered Medline: 19920601
AB PCR and Southern blot analyses demonstrate that mRNA for heme oxygenase (HO), a well known "stress protein" in a number of tissues, is present in human retina. Western and northern blots show that the protein and mRNA are also expressed in human Y-79 **retinoblastoma** cells in culture and that the HO enzyme is rapidly induced by its substrate, heme. Moreover, HO is also induced by two chemicals, sodium **arsenite** and menadione, that act as agents of oxidative stress. HO is the regulatory enzyme in the heme degradative pathway and an increase in its activity could lead to the accumulation of bilirubin, an antioxidant, in the cell at the expense of heme, a prooxidant. The HO pathway may thus be of importance in protecting the retina against oxidative stress in vivo. Moreover, the Y-79 culture system should provide an excellent model for use in examining stress mechanisms in retinal cells at a molecular level.
TI Heme oxygenase: expression in human retina and modulation by stress agents in a human **retinoblastoma** cell model system.
AB . . . present in human retina. Western and northern blots show that the protein and mRNA are also expressed in human Y-79 **retinoblastoma** cells in culture and that the HO enzyme is rapidly induced by its substrate, heme. Moreover, HO is also induced by two chemicals, sodium **arsenite** and menadione, that act as agents of oxidative stress. HO is the regulatory enzyme in the heme degradative pathway and. . .
CT Check Tags: Human; Support, Non-U.S. Gov't
Arsenic: TU, therapeutic use
Bilirubin: BI, biosynthesis
Eye Neoplasms: DT, drug therapy
*Eye Neoplasms: EN, enzymology
Heme: ME, metabolism
Heme. . . (Decyclizing): ME, metabolism
Immunoblotting
Models, Biological
Polymerase Chain Reaction
RNA, Messenger: ME, metabolism
Retina: DE, drug effects
*Retina: EN, enzymology
Retinoblastoma: DT, drug therapy
***Retinoblastoma: EN, enzymology**
Tumor Cells, Cultured
Vitamin K: TU, therapeutic use
RN 12001-79-5 (Vitamin K); **13768-07-5 (sodium arsenite)**; 14875-96-8 (Heme); 635-65-4 (Bilirubin); **7440-38-2 (Arsenic)**

L8 ANSWER 77 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:587388 CAPLUS
DN 117:187388
TI Chemistry and concept for an automated selenium-72/**arsenic**-72 generator
AU Phillips, D. R.; Hamilton, V. T.; Nix, D. A.; Taylor, W. A.; Jamriska, D. J.; Staroski, R. C.; Lopez, R. A.; Emran, A. M.
CS Isot. Nucl. Chem. Group 11, Los Alamos Natl. Lab., Los Alamos, NM, 87545, USA
SO New Trends Radiopharm. Synth., Qual. Assur., Regul. Control, [Proc. Am. Chem. Soc. Int. Symp.] (1991), Meeting Date 1990, 173-82. Editor(s): Emran, Ali M. Publisher: Plenum, New York, N. Y.
CODEN: 57XCAV
DT Conference
LA English
AB The growth of positron emission tomog. (PET), with its unique capability to image function as well as structure, depends very much on the availability of positron-emitting radioisotopes. **Arsenic**-72 is a radionuclide possessing significant potential as a PET radioisotope. A wide variety of bone, **brain**, and **tumor** seeking agents can be labeled with 72As. A 72Se/72As radiochem. generator would allow on-site recovery of high specific activity 72As for PET research and applications. A reliable, simple sepn. chem. has been developed which could be neatly automated for a safe, easy-to-use generator.
TI Chemistry and concept for an automated selenium-72/**arsenic**-72 generator
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ST **arsenic** selenium 72 generator; positron emission tomog **arsenic** 72 generator
IT Tomography
(positron-emission, selenium-72/**arsenic**-72 automated generator for)
IT 14809-46-2, Selenium-72, biological studies
RL: BIOL (Biological study)
(-**arsenic**-72 generator, automated, for positron emission tomog. research and applications)
IT 15755-33-6, **Arsenic**-72, biological studies
RL: BIOL (Biological study)
(-selenium-72 generator, automated, for positron emission tomog. research and applications)

L8 ANSWER 78 OF 123 MEDLINE on STN
AN 91211646 MEDLINE
DN 91211646 PubMed ID: 2089240
TI [Exposure to agricultural chemicals and oncogenic risk]. Esposizione a fitofarmaci e rischio oncogeno.
AU Vineis P; Settimi L; Seniori Costantini A
CS Servizio di Epidemiologia dei Tumori, Ospedale Maggiore, Universita di Torino.
SO MEDICINA DEL LAVORO, (1990 Sep-Oct) 81 (5) 363-72.
Journal code: 0401176. ISSN: 0025-7818.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
LA Italian
FS Priority Journals

EM 199105
ED Entered STN: 19910616
Last Updated on STN: 19910616
Entered Medline: 19910524
AB The authors review the available evidence on cancer risk associated with exposure to agricultural chemicals. Agricultural workers generally show a lower cancer mortality compared with other occupational categories. This observation is currently believed to be due to lower cigarette consumption. However, for some types of tumours (lymphoma, leukaemia, myeloma, soft tissue sarcoma, skin, prostate, **brain** and stomach **tumours**), mortality is higher among agricultural workers. The only chemical substances used in agriculture for which the IARC Monographs have established the existence of sufficient evidence of carcinogenicity for man are **arsenical** compounds and mineral oils; for other substances there is clear evidence of carcinogenicity in experimental animals, mostly in the absence of human data. In the case of exposure to phenoxyacetic herbicides, the available epidemiological evidence is contradictory, with excesses of non-Hodgkin lymphoma and soft tissue sarcoma reported in some studies but not in others. Cohort studies have been performed among insecticide production workers and spray operators (with excesses of lung tumour), and among grain processing workers (with excesses of non-Hodgkin lymphoma in particular). A number of case-control studies are also available, especially concerning tumours of the lymphatic and haemopoietic systems and ovarian tumours.
AB . . . be due to lower cigarette consumption. However, for some types of tumours (lymphoma, leukaemia, myeloma, soft tissue sarcoma, skin, prostate, **brain** and stomach **tumours**), mortality is higher among agricultural workers. The only chemical substances used in agriculture for which the IARC Monographs have established the existence of sufficient evidence of carcinogenicity for man are **arsenical** compounds and mineral oils; for other substances there is clear evidence of carcinogenicity in experimental animals, mostly in the absence. . .
CT Check Tags: Animal; Comparative Study; Female; Human; Male
*Agricultural Workers' Diseases: CI, chemically induced
***Arsenicals: AE, adverse effects**
English Abstract
Herbicides: AE, adverse effects
*Mineral Oil: AE, adverse effects
*Neoplasms: CI, chemically induced
*Pesticides: AE,. . .
CN 0 (**Arsenicals**); 0 (Herbicides); 0 (Pesticides)

L8 ANSWER 79 OF 123 MEDLINE on STN
AN 90150938 MEDLINE
DN 90150938 PubMed ID: 2302907
TI Malignant tumors in children of northeastern Zaire. A comparison of distribution patterns.
AU Fischer P R; Ahuka L O; Wood P B; Lucas S
CS Department of Pediatrics, Evangelical Medical Center, Nyankunde, Zaire.
SO CLINICAL PEDIATRICS, (1990 Feb) 29 (2) 95-8.
Journal code: 0372606. ISSN: 0009-9228.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 199003
ED Entered STN: 19900601
Last Updated on STN: 19980206
Entered Medline: 19900320
AB In an effort to better understand the epidemiology of cancer in Zaire, a retrospective review of biopsy-proven malignant tumors was undertaken. Of 188 biopsies taken from children aged 0-15 years over a 4.5 year period, 73 (39%) revealed malignancy. Fifty-six percent of patients with malignant tumors were boys. Lymphoma was the most common tumor (28

patients, 15 with Burkitt's Lymphoma). Sarcoma (15 patients), carcinoma (8 patients), Wilms' Tumor (6 patients), and **retinoblastoma** (5 patients) were also seen. Lymphomas were most heavily represented in the first 5 years of life, while sarcoma and carcinoma accounted for most of the malignancies in children after 10 years of age. Lymphomas and sarcomas are relatively more common in Zaire than in North America and Europe, while leukemia and **central nervous system tumors** are notably less common in Zaire. In view of current limitations on health care in rural Zaire, cancer care should be directed toward early diagnosis, quick referral for appropriate surgical care, and use of the limited **arsenal** of chemotherapy.

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L8 ANSWER 80 OF 123 MEDLINE on STN
AN 88081096 MEDLINE
DN 88081096 PubMed ID: 3335077
TI Lymphokine-activated killer cell lysis of human **neuroblastoma** cells: a model for purging tumor cells from bone marrow.
AU Ades E W; Peacocke N; Sabio H
CS Department of Pathology, Medical College of Georgia, Augusta 30912-0300.
SO CLINICAL IMMUNOLOGY AND IMMUNOPATHOLOGY, (1988 Jan) 46 (1) 150-6. Journal code: 0356637. ISSN: 0090-1229.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198802
ED Entered STN: 19900305
Last Updated on STN: 19970203
Entered Medline: 19880217
AB Evidence is presented that **neuroblastoma** tumor cells in host bone marrow is susceptible to autologous lymphokine-activated killer cells (LAK). Thus, immunologic purging of bone marrow with LAK may be considered as a tool in the **arsenal** of bone marrow purging-for autologous bone marrow transplantation.
TI Lymphokine-activated killer cell lysis of human **neuroblastoma** cells: a model for purging tumor cells from bone marrow.
AB Evidence is presented that **neuroblastoma** tumor cells in host bone marrow is susceptible to autologous lymphokine-activated killer cells (LAK). Thus, immunologic purging of bone marrow with LAK may be considered as a tool in the **arsenal** of bone marrow purging-for autologous bone marrow transplantation.
CT Check Tags: Human
*Bone Marrow: PA, pathology
Cytotoxicity, Immunologic
*Killer Cells: IM, immunology
***Neuroblastoma: PA, pathology**
*Tumor Cells, Cultured

L8 ANSWER 81 OF 123 MEDLINE on STN
AN 87130744 MEDLINE
DN 87130744 PubMed ID: 3815363
TI Stress-induced thermotolerance of the cytoskeleton of mouse **neuroblastoma** N2A cells and rat Reuber H35 hepatoma cells.

AU Wiegant F A; van Bergen en Henegouwen P M; van Dongen G; Linnemans W A
SO CANCER RESEARCH, (1987 Mar 15) 47 (6) 1674-80.
Journal code: 2984705R. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198704
ED Entered STN: 19900303
Last Updated on STN: 19970203
Entered Medline: 19870415
AB A conditioning treatment of 30 min at 42 degrees C or 43 degrees C, followed by a 4-h recovery period at 37 degrees C, induces thermotolerance state in the cytoskeleton of Reuber H35 hepatoma cells and N2A **neuroblastoma** cells. Evidence for the involvement of heat shock proteins in the development of thermotolerance in the cytoskeleton has been obtained from the following observations: only those conditioning treatments inducing the enhanced synthesis of heat shock proteins (HSPs) are able to induce the heat-resistant state of the cytoskeleton; prevention of HSP synthesis by actinomycin D or cycloheximide also prevents the acquisition of thermotolerance in the cytoskeleton; an alternative inducer of HSP synthesis, sodium **arsenite**, is also able to induce the cytoskeletal thermotolerance; the kinetics of development and disappearance of thermotolerance in the cytoskeleton is parallel to the kinetics of accumulation and decay of HSPs. The possible function of HSPs in the heat-resistant cytoskeleton of H35 hepatoma and N2A **neuroblastoma** cells is discussed.
TI Stress-induced thermotolerance of the cytoskeleton of mouse **neuroblastoma** N2A cells and rat Reuber H35 hepatoma cells.
AB . . . 4-h recovery period at 37 degrees C, induces thermotolerance state in the cytoskeleton of Reuber H35 hepatoma cells and N2A **neuroblastoma** cells. Evidence for the involvement of heat shock proteins in the development of thermotolerance in the cytoskeleton has been obtained. . . actinomycin D or cycloheximide also prevents the acquisition of thermotolerance in the cytoskeleton; an alternative inducer of HSP synthesis, sodium **arsenite**, is also able to induce the cytoskeletal thermotolerance; the kinetics of development and disappearance of thermotolerance in the cytoskeleton is. . . of accumulation and decay of HSPs. The possible function of HSPs in the heat-resistant cytoskeleton of H35 hepatoma and N2A **neuroblastoma** cells is discussed.
CT . . .
PD, pharmacology
*Cytoskeleton: UL, ultrastructure
Dactinomycin: PD, pharmacology
*Heat
*Heat-Shock Proteins: BI, biosynthesis
Kinetics
Liver Neoplasms, Experimental: UL, ultrastructure
Mice
Neuroblastoma: UL, ultrastructure
Rats

L8 ANSWER 82 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 25
AN 1987:475197 CAPLUS
DN 107:75197
TI Subcellular localization of the 84,000 dalton heat-shock protein in mouse **neuroblastoma** cells: evidence for a cytoplasmic and nuclear location
AU Van Bergen en Henegouwen, Paul M. P.; Berbers, Guy; Linnemans, Wilbert A. M.; Van Wijk, Roel
CS Dep. Mol. Cell Biol., State Univ. Utrecht, Utrecht, 3584 CH, Neth.
SO European Journal of Cell Biology (1987), 43(3), 469-78
CODEN: EJCBDN; ISSN: 0171-9335

DT Journal
LA English
AB By using affinity-purified antibodies, the 84,000-dalton heat-shock protein (hsp) was localized in mouse N2A **neuroblastoma** cells by immunocytochem. techniques. Immunofluorescence microscopy showed that hsp84 was present both in the cytoplasm and nucleus. The nucleoli were unlabeled. Immuno-Au labeling on ultrathin cyosections revealed that hsp84 was evenly distributed throughout the entire cytoplasm. No preferential assocn. of hsp84 with the plasma membrane or with membranes from organelles was obsd. In the nucleus the hsp84 was present in both the euchromatin and heterochromatin. In the nucleolus only the fibrillar part was labeled and virtually no Au particles were obsd. in the granular part. A long-term hyperthermic treatment of 3 h at 42.5.degree. induced an accumulation of hsp84 inside the nucleus. No alterations in hsp84 distribution were obsd. during treatment of the cells with 75 .mu.M Na **arsenite** for 3 h. Drastic alterations were obsd. in the nucleoli after both stress treatments. The granular part had totally disappeared and only remnants of the fibrillar part, which contained hsp84, were found. Besides the nuclear accumulations of hsp84 during heat shock, no addnl. changes in the hsp84 location in stressed cells were obsd. During recovery from the heat shock by replacing the cells at 37.degree., a decrease in the nuclear location of hsp84 was obsd., indicating the reversibility of this process.
TI Subcellular localization of the 84,000 dalton heat-shock protein in mouse **neuroblastoma** cells: evidence for a cytoplasmic and nuclear location
AB By using affinity-purified antibodies, the 84,000-dalton heat-shock protein (hsp) was localized in mouse N2A **neuroblastoma** cells by immunocytochem. techniques. Immunofluorescence microscopy showed that hsp84 was present both in the cytoplasm and nucleus. The nucleoli were unlabeled. Immuno-Au labeling on ultrathin cyosections revealed that hsp84 was evenly distributed throughout the entire cytoplasm. No preferential assocn. of hsp84 with the plasma membrane or with membranes from organelles was obsd. In the nucleus the hsp84 was present in both the euchromatin and heterochromatin. In the nucleolus only the fibrillar part was labeled and virtually no Au particles were obsd. in the granular part. A long-term hyperthermic treatment of 3 h at 42.5.degree. induced an accumulation of hsp84 inside the nucleus. No alterations in hsp84 distribution were obsd. during treatment of the cells with 75 .mu.M Na **arsenite** for 3 h. Drastic alterations were obsd. in the nucleoli after both stress treatments. The granular part had totally disappeared and only remnants of the fibrillar part, which contained hsp84, were found. Besides the nuclear accumulations of hsp84 during heat shock, no addnl. changes in the hsp84 location in stressed cells were obsd. During recovery from the heat shock by replacing the cells at 37.degree., a decrease in the nuclear location of hsp84 was obsd., indicating the reversibility of this process.

L8 ANSWER 83 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 87027372 EMBASE
DN 1987027372
TI ['Treatable' dementias].
DES DEMENCES 'TRAITABLES'.
AU Bogousslavsky J.
CS Service de Neurologie, CHUV, 1011 Lausanne, Switzerland
SO Medecine et Hygiene, (1986) 44/1673 (2710-2725).
CODEN: MEHGAB
CY Switzerland
DT Journal
FS 037 Drug Literature Index
038 Adverse Reactions Titles
052 Toxicology
LA French
SL English

CT Medical Descriptors:
*adverse drug reaction
*brain atherosclerosis
*brain dysfunction
***brain tumor**
*confusion
*dementia
*hydrocephalus
*infection
*neurotoxicity
*sarcoidosis
*subdural hematoma
intoxication
therapy
pseudodementia
psychological aspect
central nervous system
nervous system
peripheral vascular system
short survey
human
diagnosis
*antibiotic agent
*antidepressant agent
*antihypertensive agent
***arsenic**
*barbituric acid derivative
*bismuth
*carbon monoxide
*cholinergic receptor blocking agent
*clonidine
*corticosteroid
*cyanocobalamin
*digitalis
*digitalis glycoside
*disulfiram
*alcohol
*industrial toxic substance
*lead
*mercury
*methyldopa
*neuroleptic agent
*penicillin g
*phenytoin
*propranolol
*thiamine
RN (**arsenic**) 7440-38-2; (bismuth) 7440-69-9; (carbon monoxide) 630-08-0; (clonidine) 4205-90-7, 4205-91-8, 57066-25-8; (cyanocobalamin) 53570-76-6, 68-19-9, 8064-09-3; (digitalis) 8031-42-3, 8053-83-6; (disulfiram) 97-77-8; (alcohol). . .

L8 ANSWER 84 OF 123 MEDLINE on STN
AN 87039060 MEDLINE
DN 87039060 PubMed ID: 2877390
TI Phenylarsine oxide inhibits agonist-induced changes in photolabeling but not agonist-induced desensitization of the beta-adrenergic receptor.
AU Feldman R D; McArdle W; Lai C
NC HL 32501-1 (NHLBI)
SO MOLECULAR PHARMACOLOGY, (1986 Nov) 30 (5) 459-62.
Journal code: 0035623. ISSN: 0026-895X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals

EM 198612
ED Entered STN: 19900302
Last Updated on STN: 19980206
Entered Medline: 19861210
AB In the human lymphocyte, desensitization of the beta-adrenergic receptor-adenylate cyclase complex is associated with sequestration of the receptor as well as a change in photolabeling of beta-receptor proteins. Thus, desensitization of the lymphocyte beta-adrenergic receptor-adenylate cyclase system is associated with a selective reduction in the photoaffinity labeling of an Mr approximately equal to 55,000 beta-adrenergic receptor-binding site as compared to an Mr approximately equal to 68,000 beta-adrenergic receptor-binding moiety. In order to examine the relationship between sequestration and reduction in labeling of the Mr approximately equal to 55,000 peptide, we have studied the effect of phenylarsine oxide (an inhibitor of beta-receptor sequestration in **astrocytoma** cells) on agonist-induced desensitization of the beta-adrenergic receptor-adenylate cyclase system in circulating lymphocytes. Incubation of cells with phenylarsine oxide prior to exposure to agonists did not block the consequent reduction in isoproterenol-stimulated adenylate cyclase activity. However, sequestration of the receptor, as assessed by a decrease in accessibility of beta-adrenergic receptors on intact cells to hydrophilic receptor ligands, is blocked by phenylarsine oxide. Thus, the agonist-induced reduction in binding of the hydrophilic beta-adrenergic receptor ligand CGP-12177 was blocked by phenylarsine oxide (without phenylarsine oxide, 57 +/- 6% of control, with phenylarsine oxide, 97 +/- 3% of control). Photolabeling studies with [125I]iodocyanopindolol diazirine revealed that phenylarsine oxide pretreatment also blocked the selective loss in labeling of the Mr approximately equal to 55,000 beta-adrenergic receptor protein. These data suggest that agonist-induced alterations in the photolabeling pattern of the lymphocyte beta-adrenergic receptor that occur with desensitization closely parallel the apparent sequestration of beta-adrenergic receptors but can be dissociated from the initial desensitization phenomenon.
AB . . . Mr approximately equal to 55,000 peptide, we have studied the effect of phenylarsine oxide (an inhibitor of beta-receptor sequestration in **astrocytoma** cells) on agonist-induced desensitization of the beta-adrenergic receptor-adenylate cyclase system in circulating lymphocytes. Incubation of cells with phenylarsine oxide prior. . .
CT . . . P.H.S.
Adenylate Cyclase: ME, metabolism
Adrenergic beta-Agonists: AI, antagonists & inhibitors
Adrenergic beta-Agonists: PD, pharmacology
Adult
Affinity Labels: ME, metabolism
***Arsenicals: PD, pharmacology**
Dithiothreitol: PD, pharmacology
Lymphocytes: DE, drug effects
Lymphocytes: ME, metabolism
Propanolamines: AI, antagonists & inhibitors
Propanolamines: PD, pharmacology
. . .
CN 0 (Adrenergic beta-Agonists); 0 (Affinity Labels); 0 (**Arsenicals**); 0 (Propanolamines); 0 (Receptors, Adrenergic, beta); EC 4.6.1.1 (Adenylate Cyclase)

L8 ANSWER 85 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 26
AN 1985:572885 CAPLUS
DN 103:172885
TI A comparison of catecholamine-induced internalization of .beta.-adrenergic receptors and receptor-mediated endocytosis of epidermal growth factor in human **astrocytoma** cells. Inhibition by phenylarsine oxide
AU Hertel, Cornelia; Coulter, Sherry J.; Perkins, John P.
CS Dep. Pharmacol., Univ. North Carolina, Chapel Hill, NC, 27514, USA

SO Journal of Biological Chemistry (1985), 260(23), 12547-53
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB The ligand-induced internalization of .beta.-adrenergic receptors and the receptor-mediated internalization of epidermal growth factor [62229-50-9] were blocked, under similar conditions, by phenylarsine oxide (PAO) [637-03-6] in human **astrocytoma** cells (1321N1). The inhibition was not prevented or reversed by monofunctional SH agents such as 2-mercaptoethanol or glutathione; however, the inhibitory action of PAO was blocked and reversed by bifunctional thiols such as 2,3-dimercaptoethanol or dithiothreitol. The results are consistent with the interaction of PAO with vicinal SH groups to form a stable ring structure. PAO did not prevent (-)-isoproterenol [51-31-0]-induced uncoupling (desensitization) of .beta.-adrenergic receptors even though receptor internalization was completely blocked. The effects of PAO on receptor internalization could not be explained by any action of the trivalent **arsenical** to lower ATP levels. Ligand binding to both receptors was not detectably altered by PAO under conditions selective for inhibition for endocytosis. The results suggest a common mechanism for internalization of .beta.-adrenergic receptors and epidermal growth factor by a process that involves vicinal SH groups.
TI A comparison of catecholamine-induced internalization of .beta.-adrenergic receptors and receptor-mediated endocytosis of epidermal growth factor in human **astrocytoma** cells. Inhibition by phenylarsine oxide
AB The ligand-induced internalization of .beta.-adrenergic receptors and the receptor-mediated internalization of epidermal growth factor [62229-50-9] were blocked, under similar conditions, by phenylarsine oxide (PAO) [637-03-6] in human **astrocytoma** cells (1321N1). The inhibition was not prevented or reversed by monofunctional SH agents such as 2-mercaptoethanol or glutathione; however, the inhibitory action of PAO was blocked and reversed by bifunctional thiols such as 2,3-dimercaptoethanol or dithiothreitol. The results are consistent with the interaction of PAO with vicinal SH groups to form a stable ring structure. PAO did not prevent (-)-isoproterenol [51-31-0]-induced uncoupling (desensitization) of .beta.-adrenergic receptors even though receptor internalization was completely blocked. The effects of PAO on receptor internalization could not be explained by any action of the trivalent **arsenical** to lower ATP levels. Ligand binding to both receptors was not detectably altered by PAO under conditions selective for inhibition for endocytosis. The results suggest a common mechanism for internalization of .beta.-adrenergic receptors and epidermal growth factor by a process that involves vicinal SH groups.
ST catecholamine receptor internalization **astrocytoma**; EGF receptor endocytosis **astrocytoma**; sulfhydryl group receptor internalization endocytosis
IT Receptors
RL: BIOL (Biological study)
(EGF endocytosis mediation by, in **astrocytoma** cells of human, vicinal sulfhydryl groups in)
IT Mercapto group
(in .beta.-adrenergic receptor internalization and receptor-mediated EGF endocytosis, in **astrocytoma** cells of human)
IT Biological transport
(absorption, of .beta.-adrenergic receptors, in **astrocytoma** cells of human, vicinal sulfhydryl groups in)
IT Biological transport
(endocytosis, receptor-mediated, of EGF, by **astrocytoma** cells of human, vicinal sulfhydryl groups in)
IT Neuroglia
(neoplasm, **astrocytoma**, .beta.-adrenergic receptor internalization and receptor-mediated EGF endocytosis by, of human, vicinal sulfhydryl groups in)
IT Receptors

RL: BIOL (Biological study)
(.beta.-adrenergic, catecholamine-induced internalization of, in **astrocytoma** cells of human, vicinal sulfhydryl groups in)

IT 62229-50-9
RL: PROC (Process)
(receptor-mediated endocytosis of, in **astrocytoma** cells of human, vicinal sulfhydryl groups in)

IT 637-03-6
RL: BIOL (Biological study)
(.beta.-adrenergic receptor internalization and receptor-mediated EGF endocytosis inhibition by, in **astrocytoma** cells of human, mechanism of)

IT 51-31-0
RL: BIOL (Biological study)
(.beta.-adrenergic receptor internalization stimulation by, in **astrocytoma** cells of human, vicinal sulfhydryl groups in)

L8 ANSWER 86 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 85012095 EMBASE
DN 1985012095
TI Bradykinin receptor-mediated cyclic GMP formation in a nerve cell population (murine **neuroblastoma** clone N1E-115).
AU Snider R.M.; Richelson E.
CS Department of Psychiatry, Mayo Clinic and Foundation, Rochester, MN 55905, United States
SO Journal of Neurochemistry, (1984) 43/6 (1749-1754).
CODEN: JONRA
CY United Kingdom
DT Journal
FS 037 Drug Literature Index
023 Nuclear Medicine
029 Clinical Biochemistry
008 Neurology and Neurosurgery
002 Physiology
LA English
AB A clone of murine **neuroblastoma** (N1E-115) was shown to have functional receptors for the nonapeptide bradykinin. These receptors mediated a large, rapid (about 1 min to peak) and calcium-dependent increase in cyclic GMP. The median effective concentration (EC50) averaged 1.4 nM. In addition, this event was inhibited by quinacrine, 5,8,11,14-eicosatetraynoic acid, and nordihydroguaiaretic acid, suggesting involvement of phospholipase A2 with subsequent formation of lipoxygenase metabolites of arachidonic acid. [3H]Bradykinin binding to intact cells, investigated under conditions nearly identical to those used in the cyclic GMP assay, yielded binding sites with K(D)s of 0.83 pM, 1.0 nM, and 4.9 nM with respective B(max) values of 12, 160, and 250 fmol/106 cells. Apparently, the cyclic GMP response was associated with the binding site in which the K(D) = 1.0 nM. Peptide analogs of bradykinin stimulated cyclic GMP with EC50s nearly identical to their respective K(D)s determined in binding assays with [3H]bradykinin, thus providing evidence for receptor specificity of this response. This finding of a biochemical response of bradykinin promises to make N1E-115 cells a convenient model system for study of neuronal bradykinin receptors.
TI Bradykinin receptor-mediated cyclic GMP formation in a nerve cell population (murine **neuroblastoma** clone N1E-115).
AB A clone of murine **neuroblastoma** (N1E-115) was shown to have functional receptors for the nonapeptide bradykinin. These receptors mediated a large, rapid (about 1 min. . .
CT Medical Descriptors:
*bradykinin h 3
*drug binding
*drug metabolism
*drug receptor binding
***neuroblastoma cell**

guanine h 3
guanosine 3',5' phosphate c 14
priority journal
pharmacokinetics
nonhuman
nervous system
mouse
in vitro study
*5,8,11,14 icosatetraynoic acid
*bradykinin
*bradykinin receptor
*cyclic gmp
*indometacin
*lipoxygenase
arsenosobenzene
bacitracin
mepacrine
nordihydroguaiaretic acid
phenanthroline
polyethyleneimine
radioisotope

RN (5,8,11,14 icosatetraynoic acid) 1191-85-1; (bradykinin) 58-82-2, 5979-11-3; (cyclic gmp) 7665-99-8; (indometacin) 53-86-1, 74252-25-8, 7681-54-1; (lipoxygenase) 9027-17-2, 9029-60-1; (**arsenosobenzene**) 637-03-6; (bacitracin) 1405-87-4; (mepacrine) 69-05-6, 83-89-6; (nordihydroguaiaretic acid) 500-38-9; (phenanthroline) 12678-01-2; (polyethyleneimine) 74913-72-7

L8 ANSWER 87 OF 123 MEDLINE on STN DUPLICATE 27
AN 85018310 MEDLINE
DN 85018310 PubMed ID: 6385475
TI [Carcinogenicity of various drugs].
O kantserogennosti nekotorykh lekarstvennykh veshchestv.
AU Bilynskii B T; Shparik Ia V
SO VOPROSY ONKOLOGII, (1984) 30 (8) 13-22. Ref: 102
Journal code: 0413775. ISSN: 0507-3758.
CY USSR
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA Russian
FS Priority Journals
EM 198411
ED Entered STN: 19900320
Last Updated on STN: 19980206
Entered Medline: 19841101
CT Check Tags: Animal; Female; Human; Male
Adult
Antibiotics: AE, adverse effects
Arsenicals: AE, adverse effects
Barbiturates: AE, adverse effects
Brain Neoplasms: CI, chemically induced
*Carcinogens
Child
Cimetidine: AE, adverse effects
Isoniazid: AE, adverse effects
Kidney Neoplasms: CI, chemically induced
. . .
CN 0 (Antibiotics); 0 (**Arsenicals**); 0 (Barbiturates); 0 (Carcinogens); 0 (Pharmaceutical Preparations); 0 (Rauwolfia Alkaloids)

L8 ANSWER 88 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1981:450949 CAPLUS
DN 95:50949
TI Excitation functions and production of **arsenic** radioisotopes for

environmental toxicology and biomedical purposes
AU Basile, Daniela; Birattari, Claudio; Bonardi, Mauro; Goetz, Lothar; Sabbioni, Enrico; Salomone, Annalisa
CS Inst. Phys., Natl. Inst. Nucl. Phys., Milan, Italy
SO International Journal of Applied Radiation and Isotopes (1981), 32(6), 403-10
CODEN: IJARAY; ISSN: 0020-708X
DT Journal
LA English
AB In nuclear medicine, radioactive 74As is employed as a positron emitter for the localization of **brain tumors**, cerebral occlusive vascular lesions, arterious-venous malformations, etc. The excitation functions were studied for the prodn. of the As radioisotopes from targets of natural Ge via nuclear reactions (p,xn).
TI Excitation functions and production of **arsenic** radioisotopes for environmental toxicology and biomedical purposes
AB In nuclear medicine, radioactive 74As is employed as a positron emitter for the localization of **brain tumors**, cerebral occlusive vascular lesions, arterious-venous malformations, etc. The excitation functions were studied for the prodn. of the As radioisotopes from targets of natural Ge via nuclear reactions (p,xn).
ST **arsenic** isotope source prodn; germanium proton neutron

L8 ANSWER 89 OF 123 MEDLINE on STN DUPLICATE 28
AN 81103293 MEDLINE
DN 81103293 PubMed ID: 6256910
TI [Pseudo-tumoral human African trypanosomiasis due to Trypanosoma gambiense. Clinical and tomodensitometry study (author's transl)]. Formes pseudo-tumorales de la trypanosomiase africaine a Trypanosoma gambiense. Etude clinique et tomodensitometrique.
AU Poisson M; Bleibel J M; Regnier A; Mashaly R; Le Bigot P; Danis M; Buge A
SO SEMAINE DES HOPITAUX, (1980 Dec 18-25) 56 (47-68) 1979-82.
Journal code: 9410059.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA French
FS Priority Journals
EM 198103
ED Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810327
AB The authors report an observation of african trypanosomiasis due to Trypanosoma Gambiense, clinical signs included massive and progressive hemiplegia, papillary edema and vascular shift from median line at arteriography. These pseudo tumoral clinical features are unusual in this disease. Asymetrical heterogenous hypodensities of the centrum semioval are dominant in the initial CT scanner aspect. The confrontation of CT scanner images to the clinical and evolutive data suggests the presence of associated cerebral edema and demyelination. With treatment, hypodensities were regressing while images of subcortical atrophy appeared. Lastly, in spite of severe general signs and the importance of neurological deficit, **arsenical** treatment associated with high doses of corticotherapy lead to a rapid improvement.
AB . . . regressing while images of subcortical atrophy appeared. Lastly, in spite of severe general signs and the importance of neurological deficit, **arsenical** treatment associated with high doses of corticotherapy lead to a rapid improvement.
CT Check Tags: Case Report; Human; Male
Adult
Brain: RA, radiography
***Brain Neoplasms: DI, diagnosis**
Diagnosis, Differential
English Abstract
*Tomography, X-Ray Computed

Trypanosoma brucei gambiense
*Trypanosomiasis, African: DI, diagnosis
Trypanosomiasis, African: RA,. . .

L8 ANSWER 90 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 80049919 EMBASE
DN 1980049919
TI Effects of metal ions and selenoamino acids on induction of glutathione peroxidase in mouse **neuroblastoma**.
AU Germain G.S.; Arneson R.M.
CS Dept. Biochem., Univ. Tennessee, Cent. Hlth Sci., Memphis, Tenn., United States
SO Enzyme, (1979) 24/5 (337-341).
CODEN: ENZYBT
CY Switzerland
DT Journal
FS 037 Drug Literature Index
LA English
TI Effects of metal ions and selenoamino acids on induction of glutathione peroxidase in mouse **neuroblastoma**.
CT Medical Descriptors:
***neuroblastoma**
*protein synthesis
drug comparison
drug screening
mouse
animal experiment
nervous system
drug administration
***arsenic**
*chromium
*glutathione peroxidase
*molybdenum
*selenious acid
*selenocystine
*selenomethionine
RN (**arsenic**) 7440-38-2; (chromium) 16065-83-1, 7440-47-3; (glutathione peroxidase) 9013-66-5; (molybdenum) 7439-98-7; (selenious acid) 7783-00-8; (selenocystine) 1464-43-3, 2897-21-4, 29621-88-3; (selenomethionine) 1464-42-2, 3211-76-5

L8 ANSWER 91 OF 123 MEDLINE on STN
AN 77251704 MEDLINE
DN 77251704 PubMed ID: 578152
TI Geographical pathology as a method for detecting occupational cancer.
AU Goldsmith J R
SO JOURNAL OF OCCUPATIONAL MEDICINE, (1977 Aug) 19 (8) 533-9.
Journal code: 7502807. ISSN: 0096-1736.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197710
ED Entered STN: 19900314
Last Updated on STN: 19980206
Entered Medline: 19771028
AB Geographical pathology points to environmental factors in cancer and helps estimate their potential magnitude. An occupational contribution was established by 1972 for cancer of the mouth, lung, bladder, and skin. Additionally partly based on geographical pathology, an occupational etiology is accepted for some **cancer** of nasopharynx, **brain**, liver, pleura, nasal sinus, bone and bone marrow, and possibly stomach. For identifying new occupational factors based on geographical comparisons, both an optimal size of work force to be

followed-up and a sufficiently high proportion of work force in the geographical unit's population are necessary. Hypothetical variations based on 30-year follow-up of asbestos workers illustrate this. Cancer surveys and registries can greatly facilitate detection of occupational cancer. Evidence for occupational factors in the geographical pathology of lymphosarcoma is briefly summarized; but no conclusions are reached.

AB . . . of the mouth, lung, bladder, and skin. Additionally partly based on geographical pathology, an occupational etiology is accepted for some **cancer** of nasopharynx, **brain**, liver, pleura, nasal sinus, bone and bone marrow, and possibly stomach. For identifying new occupational factors based on geographical comparisons,. . .

CT Check Tags: Female; Human; Male
Arsenic Poisoning
Environmental Exposure
Epidemiologic Methods
Europe
Geography
Lymphoma, Non-Hodgkin: CI, chemically induced
*Neoplasms: ET, etiology
Neoplasms: MO, mortality
*Occupational. . .

L8 ANSWER 92 OF 123 CANCERLIT on STN
AN 77618397 CANCERLIT
DN 77618397
TI RADIOACTIVE PHARMACEUTICALS IN NEUROLOGICAL DIAGNOSIS.
AU Haubold U
CS Strahlenklinik u. Poliklinik, Isotopenlabor, Klinikum Charlottenburg der Freien Universitat Berlin, Spandauer Damm 130, 1000 Berlin 19, W. Germany.
SO Therapiewoche, (1976) 26 (27) 4479-4488.
ISSN: 0040-5973.
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Institute for Cell and Developmental Biology
EM 197707
ED Entered STN: 19941107
Last Updated on STN: 19941107

AB The use of radiopharmaceuticals in myeloscintigraphy, cisternography, cerebrospinal fluid circulatory studies, vitamin B12 resorption assays, cerebral hemorrhage localization, and **tumor** diagnosis is reviewed. **Brain** scintigraphy is uncomplicated with TC99m, which has a low radiation load and a short half-life; whole body exposure after administration of 10 mCi iv is only 0.1 rads. Tumor localization is also more accurate than that after carotid angiography. The radionuclide is especially indicated for the presentation of space-displacing hemispheric masses and subdural hematomas, but not well indicated for infratentorial tumors or poorly delimited masses at the skull base. In the latter area, an improved contrast between tumor focus and adjacent tissue can be achieved by techneticum-labeled compounds which are rapidly excreted by the kidney, such as DTPA (diethylenetriaminopentaacetic acid) or citrate complexes. Other diagnostic agents include radioiodinated human serum albumin, radiomercurated chlormerodrin, Bi206 nitrate, As-74 **arsenite/arsenate**, and Cu64-EDTA (ethylenediaminetetraacetic acid). All of these penetrate tumor foci indifferently. Further improvement in differentiating between tumor, inflammatory focus, or infarction can be obtained with tumor-specific agents, such as Ga67 citrate in carrier-free form or labeled bleomycin. These compounds are taken up actively by viable tumor cells, but not by necrotic tissue. (15 refs)

AB The use of radiopharmaceuticals in myeloscintigraphy, cisternography, cerebrospinal fluid circulatory studies, vitamin B12 resorption assays, cerebral hemorrhage localization, and **tumor** diagnosis is reviewed. **Brain** scintigraphy is uncomplicated with TC99m, which has a low radiation load and a short half-life; whole body exposure after

administration. . . as DTPA (diethylenetriaminopentaacetic acid) or citrate complexes. Other diagnostic agents include radioiodinated human serum albumin, radiomercurated chlormerodrin, Bi206 nitrate, As-74 **arsenite/arsenate**, and Cu64-EDTA (ethylenediaminetetraacetic acid). All of these penetrate tumor foci indifferently. Further improvement in differentiating between tumor, inflammatory focus, or. . .

L8 ANSWER 93 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 77106735 EMBASE
DN 1977106735
TI Computer tomography: experience of the first 200 cases examined at the Dept. of Neuroradiology of Umea Hospital (Swedish).
AU Forssell A.; Liliequist B.
CS Rontgenavd. II, Umea Las., Umea, Sweden
SO Lakartidningen, (1976) 73/28-29 (2475-2478).
CODEN: LAKAA3
DT Journal
FS 008 Neurology and Neurosurgery
014 Radiology
027 Biophysics, Bioengineering and Medical Instrumentation
LA Swedish
AB Since the introduction of computer tomography in 1972, this new method has rapidly established itself as an extremely valuable instrument in the neuro radiologic **arsenal**. This article presents the results of the first 200 examinations at the department of neuro radiology in Umea. The results are in close agreement with previous experiences. The method has thus proved to be a safe aid to, i.e., differential diagnosis of intracerebral hemorrhage and infarct. It has also proved highly suitable for the investigation of traumatic lesions. Tumor diagnosis can be very far reaching, especially if the so called contrast enhancement is applied, and the agreement between the findings in computer tomography and encephalography plus angiography respectively was found to be extremely good. The number of the latter examinations has reduced considerably with increased experience of the new method.
AB . . . computer tomography in 1972, this new method has rapidly established itself as an extremely valuable instrument in the neuro radiologic **arsenal**. This article presents the results of the first 200 examinations at the department of neuro radiology in Umea. The results. . .
CT Medical Descriptors:
*brain angiography
***brain tumor**
*computer assisted tomography
etiology
diagnosis
major clinical study
computer analysis

L8 ANSWER 94 OF 123 MEDLINE on STN
AN 76229880 MEDLINE
DN 76229880 PubMed ID: 945708
TI Vinyl chloride-associated liver disease.
AU Berk P D; Martin J F; Young R S; Creech J; Selikoff I J; Falk H; Watanabe P; Popper H; Thomas L
SO ANNALS OF INTERNAL MEDICINE, (1976 Jun) 84 (6) 717-31.
Journal code: 0372351. ISSN: 0003-4819.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals
EM 197608
ED Entered STN: 19900313
Last Updated on STN: 19900313

Entered Medline: 19760823

AB Although polyvinyl chloride has been produced from vinyl chlride monomer for more than 40 years, recognition of toxicity among vinyl chloride polymerization workers is more recent. In the mid 1960s, workers involved in cleaning polymerization tanks were found to have acro-osteolysis. In 1974, the same population of workers was found to be at risk for an unusual type of hepatic fibrosis and angiosarcoma of the liver. We describe two cases of vinyl chloride-associated liver injury, one of hepatic fibrosis and one of angiosarcoma. Histologic features of these lesions are similar to the hepatic fibrosis and angiosarcomas resulting from chronic exposure to inorganic **arsenicals**. Preliminary studies suggest that the toxicity of vinyl chloride may result from formation, during high-dose exposure, of active metabolites by mixed function oxidases of the liver. Epidemiologic studies indicate an increased incidence not only of liver disease, but also of **cancers** of the **brain**, lung, and possibly other organs.

AB . . . angiosarcoma. Histologic features of these lesions are similar to the hepatic fibrosis and angiosarcomas resulting from chronic exposure to inorganic **arsenicals**. Preliminary studies suggest that the toxicity of vinyl chloride may result from formation, during high-dose exposure, of active metabolites by. . . mixed function oxidases of the liver. Epidemiologic studies indicate an increased incidence not only of liver disease, but also of **cancers** of the **brain**, lung, and possibly other organs.

CT Check Tags: Animal; Case Report; Human; Male
Adult
Arsenicals: AE, adverse effects
Epidemiologic Methods
Hemangiosarcoma: CI, chemically induced
Hemangiosarcoma: PA, pathology
Liver Cirrhosis: CI, chemically induced
Liver Cirrhosis:. . .

CN 0 (**Arsenicals**); 0 (Polymers); 0 (Vinyl Compounds)

L8 ANSWER 95 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

AN 77008666 EMBASE

DN 1977008666

TI Neurologic disorders in renal failure (Second of two parts).

AU Raskin N.H.; Fishman R.A.

CS Dept. Neurol., Univ. California, San Francisco, Calif. 94143, United States

SO New England Journal of Medicine, (1976) 294/4 (204-210).
CODEN: NEJMAG

DT Journal

FS 008 Neurology and Neurosurgery
028 Urology and Nephrology
006 Internal Medicine
020 Gerontology and Geriatrics

LA English

AB This article is the second part of a review of this subject. The first part was published a week earlier in the Jan. 15 issue of the same journal (New England J. Med., 294: 143-148, 1974). In this first part the following subjects were summarized: Uremic encephalopathy and its manifestations of asterixis, tremor, myoclonus, tetany, motor abnormalities, convulsions, electroencephalographic findings; the treatment of convulsions; cerebrospinal fluid findings in uremic encepholopathy, and the pathophysiology of this condition. This second part is concerned with uremic neuropathy and the neurological complications of dialysis and renal transplantations. Uremic neuropathy is present in at least 65 percent of patients who are about to begin dialysis for chronic renal failure and may be the most common neurological complication of chronic uremia. It is described as a distal, symmetrical syndrome, affecting the lower extremities more than the upper and is clinically similar to other toxic neuropathies. The 'restless legs

syndrome' is common and likely a prodromal symptom. Burning of the feet similar to that seen in alcoholics and **arsenical** neuropathy is an early symptom and muscle cramps are common. Most patients with uremic neuropathy will improve on dialysis although severe cases seldom recover completely. Renal transplantation affords a much better prognosis; most patients recover in 6 to 12 months. Slowing of nerve conduction occurs frequently in uremia without other symptoms or signs of neuropathy. The pathology of uremic neuropathy is focused on destruction of the axon with secondary demyelinization. Consequently, motor nerve conduction velocity is not a dependable guide to the severity of the neuropathy. The secondary segmental loss of myelin is consequential to the axonal destruction which in turn, likely represents metabolic failure of the perikaryon. (Voris - Chicago, Ill.)

AB . . . legs syndrome' is common and likely a prodromal symptom. Burning of the feet similar to that seen in alcoholics and **arsenical** neuropathy is an early symptom and muscle cramps are common. Most patients with uremic neuropathy will improve on dialysis although. . .

CT Medical Descriptors:
*brain infection
***brain tumor**
*chronic kidney failure
*dementia
*dialysis
*dysequilibrium syndrome
*subdural hematoma
*uremic polyneuropathy
*wernicke encephalopathy
review

L8 ANSWER 96 OF 123 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 75014437 EMBASE
DN 1975014437
TI Radioactive isotopes.
AU Agarwal K.C.; Laha N.N.
CS G.R. Med. Coll., Gwalior, India
SO Medicine and Surgery, (1973) 13/7-8 (25-29).
CODEN: MESUA6
DT Journal
FS 037 Drug Literature Index
010 Obstetrics and Gynecology
LA English
CT Medical Descriptors:
***arsenic 74**
***brain tumor**
*breast carcinoma
*cesium 144
*diagnosis
*leukemia
*magnesium 28
*multiple myeloma
*drug therapy
*polycythemia vera
*prostate carcinoma
*radioactivity
*scintigraphy
*squamous cell carcinoma
*thyroid carcinoma
therapy
methodology
*bromine 82
*calcium 45
*calcium 47
*carbon 14
*cesium 137

*chromium 51
*cobalt 60
*copper 64
*gold. . .

L8 ANSWER 97 OF 123 MEDLINE on STN DUPLICATE 29
AN 72046319 MEDLINE
DN 72046319 PubMed ID: 5121418
TI An in vitro assay for comparing isotopic **brain tumor** scanning agents.
AU Kornblith P L; Messer J R
SO SURGICAL FORUM, (1971) 22 397-8.
Journal code: 0337723. ISSN: 0071-8041.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197201
ED Entered STN: 19900310
Last Updated on STN: 19900310
Entered Medline: 19720126
TI An in vitro assay for comparing isotopic **brain tumor** scanning agents.
CT Check Tags: Human
Arsenic: ME, metabolism
***Brain Neoplasms: ME, metabolism**
Cells, Cultured
Chlormerodrin: ME, metabolism
Meningioma: ME, metabolism
Mercury Isotopes
Neuroglia: ME, metabolism
*Radionuclide Imaging
Serum Albumin, Radio-Iodinated: ME, metabolism
RN 62-37-3 (Chlormerodrin); **7440-38-2 (Arsenic)**

L8 ANSWER 98 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 30
AN 1969:401624 CAPLUS
DN 71:1624
TI Uptake of radioarsenic-labeled chromic .beta.-glycerophosphate by experimental **brain tumors**
AU Anghileri, Leopoldo J.; Reba, Richard C.; Wagner, Henry N., Jr.
CS Johns Hopkins Med. Inst., Baltimore, MD, USA
SO Investigative Radiology (1969), 4(2), 91-6
CODEN: INVRAV; ISSN: 0020-9996
DT Journal
LA English
AB Cr .beta.-glycerophosphate labeled with 51Cr accumulates actively in mice with transplanted ependymal tumors. The expts. reported demostrate that radiolabels other than 51Cr can be incorporated into this particular Cr complex without significantly altering its metabolic behavior. Radioarsenic was used effectively for this purpose.
TI Uptake of radioarsenic-labeled chromic .beta.-glycerophosphate by experimental **brain tumors**
ST tumors As uptake; uptake As tumors; **arsenic** uptake tumors; **brain tumors** As uptake
IT **Brain, neoplasms**
(glycerophosphate metabolism by)
IT **Neoplasms**, metabolism
(of glycerophosphate, by **brain**)
IT Chromium, with glycerol 2-(dihydrogen phosphate)
Glycerol, 2-(dihydrogen phosphate), chromium complexes
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by **neoplasms** of **brain**)

L8 ANSWER 99 OF 123 MEDLINE on STN
AN 69060451 MEDLINE
DN 69060451 PubMed ID: 5303656
TI [Temporal **meningiomas**].
Temporale Meningeome.
AU Richard K E; Frowein R A; Friedmann G
SO ZENTRALBLATT FUR NEUROCHIRURGIE, (1968) 29 (2) 109-29.
Journal code: 0413646. ISSN: 0044-4251.
CY GERMANY, EAST: German Democratic Republic
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 196902
ED Entered STN: 19900101
Last Updated on STN: 19970203
Entered Medline: 19690203
TI [Temporal **meningiomas**].
Temporale Meningeome.
CT Check Tags: Human
Arsenic
***Brain Neoplasms: DI, diagnosis**
Brain Neoplasms: RA, radiography
Brain Neoplasms: SU, surgery
Cerebral Angiography
Cerebral Ventriculography
Copper
Electroencephalography
***Meningioma: DI, diagnosis**
Meningioma: RA, radiography
Meningioma: SU, surgery
Radioisotopes
Radionuclide Imaging
Sphenoid Bone
*Temporal Lobe
RN **7440-38-2 (Arsenic)**; 7440-50-8 (Copper)

L8 ANSWER 100 OF 123 MEDLINE on STN
AN 68055545 MEDLINE
DN 68055545 PubMed ID: 6061765
TI Penetration of **brain** and **brain tumor**. VI.
Radioactive scanning agents.
AU Soloway A H; Aronow S; Kaufman C; Balcius J F; Whitman B; Messer J R
SO JOURNAL OF NUCLEAR MEDICINE, (1967 Nov) 8 (11) 792-9.
Journal code: 0217410. ISSN: 0161-5505.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196801
ED Entered STN: 19900101
Last Updated on STN: 19970203
Entered Medline: 19680122
TI Penetration of **brain** and **brain tumor**. VI.
Radioactive scanning agents.
CT Check Tags: Animal
Arsenic
***Brain Neoplasms: RA, radiography**
Chromium Isotopes
Copper
Gallium
Germanium
Iron Isotopes
Mercury Isotopes

Mice
Neoplasm Transplantation
Neoplasms, Experimental: RA, radiography
Phosphorus. . .
RN 7440-26-8 (Technetium); **7440-38-2 (Arsenic)**; 7440-50-8 (Copper); 7440-55-3 (Gallium); 7440-56-4 (Germanium)

L8 ANSWER 101 OF 123 MEDLINE on STN
AN 68355935 MEDLINE
DN 68355935 PubMed ID: 5999705
TI [Isotope diagnosis in neurosurgery].
Isotopendiagnostik in der Neurochirurgie.
AU Wilcke O
SO ACTA NEUROCHIRURGICA, (1966) 15 Suppl 151:1+.
Journal code: 0151000. ISSN: 0001-6268.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 196809
ED Entered STN: 19900101
Last Updated on STN: 19970203
Entered Medline: 19680919
CT Check Tags: Human
Arsenic: DU, diagnostic use
Bismuth: DU, diagnostic use
Brain Diseases: CF, cerebrospinal fluid
*Brain Diseases: DI, diagnosis
***Brain Neoplasms: DI, diagnosis**
Cerebral Hemorrhage: DI, diagnosis
Cerebrovascular Circulation
Copper
Fistula: DI, diagnosis
Fluoresceins: DU, diagnostic use
Fluorine: DU, diagnostic. . .
RN 7440-26-8 (Technetium); **7440-38-2 (Arsenic)**; 7440-50-8 (Copper); 7440-55-3 (Gallium); 7440-69-9 (Bismuth); 7782-41-4 (Fluorine)

L8 ANSWER 102 OF 123 MEDLINE on STN
AN 67057006 MEDLINE
DN 67057006 PubMed ID: 5954299
TI [Biochemical studies on storage in **tumor** of radioisotopes used for **brain neoplasms** diagnosis].
Biochemische untersuchungen uber tumorspeicherung der zur hirntumor-diagnostik verwendeten radioisotope.
AU Gerhard H; Mundinger F
SO ACTA RADIOLOGICA: THERAPY, PHYSICS, BIOLOGY, (1966) 5 118-22.
Journal code: 0000201. ISSN: 0567-8064.
CY Sweden
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 196703
ED Entered STN: 19900101
Last Updated on STN: 19970203
Entered Medline: 19670304
TI [Biochemical studies on storage in **tumor** of radioisotopes used for **brain neoplasms** diagnosis].
Biochemische untersuchungen uber tumorspeicherung der zur hirntumor-diagnostik verwendeten radioisotope.
CT Check Tags: Human
***Arsenic: ME, metabolism**
*Bismuth: ME, metabolism
***Brain Neoplasms: ME, metabolism**

***Brain Neoplasms: RA, radiography**
*Cell Nucleus: ME, metabolism
*Chlormerodrin: ME, metabolism
*Copper: ME, metabolism
*Extracellular Space: ME, metabolism
Glioma: RA, radiography
. . .
RN 62-37-3 (Chlormerodrin); **7440-38-2 (Arsenic)**; 7440-50-8 (Copper); 7440-69-9 (Bismuth)

L8 ANSWER 103 OF 123 MEDLINE on STN
AN 66018058 MEDLINE
DN 66018058 PubMed ID: 5834955
TI The uptake of labeled proteins by particulate fractions of tumor and normal tissues after injection into mice.
AU Mego J L; McQueen J D
SO CANCER RESEARCH, (1965 Jul) 25 (6) 865-9.
Journal code: 2984705R. ISSN: 0008-5472.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196512
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19651227
CT Check Tags: Animal
Arsenic
***Ependymoma: ME, metabolism**
Injections, Intravenous
*Kidney: ME, metabolism
*Liver: ME, metabolism
Mice
*Neoplasms, Experimental: ME, metabolism
Pinocytosis
Radioisotopes
*Serum Albumin: ME,. . .
RN **7440-38-2 (Arsenic)**

L8 ANSWER 104 OF 123 MEDLINE on STN
AN 66132830 MEDLINE
DN 66132830 PubMed ID: 4286798
TI Experiences with **malignant brain tumours** in clinic and in tissue culture.
AU Mungyerova G; Jacz K; Kuzma I; Babusikova O; Kalafut F
SO ACTA NEUROCHIRURGICA, (1965) 13 (3) 393-406.
Journal code: 0151000. ISSN: 0001-6268.
CY Austria
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196607
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19660731
TI Experiences with **malignant brain tumours** in clinic and in tissue culture.
CT Check Tags: Female; Human; In Vitro; Male
Adolescent
Adult
Aged
*Alkylating Agents: TU, therapeutic use
***Arsenicals: TU, therapeutic use**

***Astrocytoma: DT, drug therapy**
***Brain Neoplasms: DT, drug therapy**
***Brain Neoplasms: RT, radiotherapy**
*Busulfan: PD, pharmacology
Clinical Trials
*Cyclophosphamide: TU, therapeutic use
***Glioblastoma: DT, drug therapy**
***Glioblastoma: RT, radiotherapy**
*Glioma: RT, radiotherapy
*Mannomustine: PD, pharmacology
Middle Age
*Tissue Culture
CN 0 (Alkylating Agents); 0 (**Arsenicals**)

L8 ANSWER 105 OF 123 MEDLINE on STN
AN 66173921 MEDLINE
DN 66173921 PubMed ID: 5888469
TI [Scintigraphy of **brain tumors**].
Die Szintigraphie bei Hirntumoren.
AU Wilcke O
SO RADIOLOGE, (1965 Oct) 5 (10) 393-400.
Journal code: 0401257. ISSN: 0033-832X.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 196610
ED Entered STN: 19900101
Last Updated on STN: 19970203
Entered Medline: 19661023
TI [Scintigraphy of **brain tumors**].
Die Szintigraphie bei Hirntumoren.
CT Check Tags: Human
Albumins
Antifibrinolytic Agents
Arsenic
Bismuth
***Brain Neoplasms: DI, diagnosis**
Copper
Fluoresceins
Gallium
Iodine Radioisotopes: DU, diagnostic use
Iron Isotopes
Mercury
Potassium
Povidone
*Radiometry
*Radionuclide Imaging
Sodium
. . .
RN 7439-97-6 (Mercury); 7440-09-7 (Potassium); 7440-23-5 (Sodium); 7440-26-8 (Technetium); **7440-38-2 (Arsenic)**; 7440-50-8 (Copper); 7440-55-3 (Gallium); 7440-69-9 (Bismuth); 9003-39-8 (Povidone)

L8 ANSWER 106 OF 123 MEDLINE on STN
AN 66038184 MEDLINE
DN 66038184 PubMed ID: 5294585
TI [Positrocephalography. Results in 1,400 cases. Comparative study with angiography, pneumoencephalography and electroencephalography].
Positrocefalografia. resultados em 1,400 casos. Estudo comparativo com a angiografia, a pneumencefalografia e a eletrencefalografia.
AU Wilcke O; Brock M
SO ARQUIVOS DE NEURO-PSIQUIATRIA, (1965 Dec) 23 (4) 261-70.
Journal code: 0125444. ISSN: 0004-282X.

CY Brazil
DT Journal; Article; (JOURNAL ARTICLE)
LA Portuguese
FS Priority Journals
EM 196601
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19660121
CT Check Tags: Comparative Study; Human
Arsenic
***Brain Neoplasms: DI, diagnosis**
*Cerebral Angiography
*Cerebral Ventriculography
*Radionuclide Imaging
RN **7440-38-2 (Arsenic)**

L8 ANSWER 107 OF 123 MEDLINE on STN
AN 65093019 MEDLINE
DN 65093019
TI C OMPARISON OF ISOTOPES FOR SCANNING.
AU MATTHEWS C M
SO J NUCL MED, (1965 MAR) 22 155-68.
CY United States
DT Journal
LA English
FS OLDMEDLINE
EM 196508
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST **arsenic**; **brain neoplasms**; chlormerodrin; cobalt isotopes; diuretics, mercurial; fluorine; gallium; iodine isotopes; neoplasm diagnosis; niobium; radioisotope scanning; serum albumin, radio-iodinated; technetium
RN 62-37-3 (CHLORMERODRIN); 7440-03-1 (NIOBIUM); 7440-26-8 (TECHNETIUM); **7440-38-2 (ARSENIC)**; 7440-48-4 (COBALT); 7440-55-3 (GALLIUM); 7553-56-2 (IODINE); 7782-41-4 (FLUORINE); 9048-46-8 (SERUM ALBUMIN)

L8 ANSWER 108 OF 123 MEDLINE on STN
AN 65001463 MEDLINE
DN 65001463
TI AN EXPERIMENTAL STUDY OF TISSUE-CONCENTRATION RATIOS OF AS74 **ARSENATE** AND LABELED ORGANIC CONJUGATES.
AU MCQUEEN J D; MEGO J L
SO JOURNAL OF NEUROSURGERY, (1964 AUG) 21 641-6.
ISSN: 0022-3085.
CY United States
DT Journal
LA English
FS OLDMEDLINE
EM 196501
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI AN EXPERIMENTAL STUDY OF TISSUE-CONCENTRATION RATIOS OF AS74 **ARSENATE** AND LABELED ORGANIC CONJUGATES.
ST **arsenic**; azo compounds; **brain neoplasms**; **ependymoma**; experimental lab study; lysine; metabolism; mice; neoplasm diagnosis; neoplasms, experimental; radioisotope scanning; radioisotopes; tryparsamide
RN 554-72-3 (TRYPARSAMIDE); **7440-38-2 (ARSENIC)**; 56-87-1Q, 70-54-2Q, 25104-18-1Q (LYSINE)

L8 ANSWER 109 OF 123 CANCERLIT on STN
AN 65700490 CANCERLIT
DN 65700490

TI CHRONIC POISONOUS EFFECTS OF NATURAL SUBSTANCES.
AU Druckrey H
SO Z Lebensm Unters Forsch, (1964) 125 (4) 289-294.
ISSN: 0044-3026.
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Cancer Assessment Review Committee
EM 197512
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB At the 7th Conference of the European Research Committee for the Protection of the Population from chronic toxic environmental damages ('Eurotox') held in Brussels (June 3-5, 1964), R. Truhaut reported on the carcinogenic action of some inorganic substances (nickel carbonyl, metallic nickel, cadmium, **arsenic**, etc). A. La fontaine discussed the contamination of air, water and food by radioactive substances. P. Shubik found that the amount of tar in charcoal-broiled steaks was equivalent to that found in 700 cigarettes. E. Bolyand reported on estrogenic substances in plants and their use in cosmetics. F. Dickens discussed the carcinogenic properties of some lactones, including aflatoxin (see CRA 1(1):Number 72; ibid, (5):Number 872, 1963; and ibid, 2(3):Number 484, 1964). J. Mc. L. Philip reported on the toxic effect of aflatoxin (A). In young rats fed peanut meal for more than 30 wk, liver tumors, and some lung metastases, were found. E. Le Breton found 200 microg of angstroms did not cause embryonal malformation in rats; after partial hepatectomy 50 microg angstroms inhibited liver regeneration of rats; biochemical studies showed blockage of RNA and DNA synthesis. Y. Ueno isolated luteoskyrene and a chloride-containing peptide from Penicillium islandicum, both of which caused malignant hepatic tumors when admin to rats; biochemical studies revealed the inhibition of respiration, oxidative phosphorylation and glycogen synthesis. F. S. C. Roe discussed the carcinogenic effect of some volatile oils (orange, lemon, eucalyptus etc). P. N. Magee showed that the alkaloids (cyclic esters of hydroxylated 3,4-unsaturated pyrrolizidines with branching side chain) from Senecio jacobaea caused liver cancer. 'Cycasin' (C; methyl-azoxymethanol-glycoside of Cycas plants) produced carcinomas of the kidney and liver in rats. G. L. Lacquer found that C was not carcinogenic to germfree rats by its aglycone (methyl-azoxy-methanol) caused liver cancer in guinea pigs and intestinal carcinomas in rats. H. Druckrey showed that methylnitrosourea caused **malignant tumors** of **brain** and **spinal cord** in rats. Azoethane was found to be carcinogenic.
AB . . . Brussels (June 3-5, 1964), R. Truhaut reported on the carcinogenic action of some inorganic substances (nickel carbonyl, metallic nickel, cadmium, **arsenic**, etc). A. La fontaine discussed the contamination of air, water and food by radioactive substances. P. Shubik found that the. . . its aglycone (methyl-azoxy-methanol) caused liver cancer in guinea pigs and intestinal carcinomas in rats. H. Druckrey showed that methylnitrosourea caused **malignant tumors** of **brain** and **spinal cord** in rats. Azoethane was found to be carcinogenic.

L8 ANSWER 110 OF 123 MEDLINE on STN DUPLICATE 31
AN 64137407 MEDLINE
DN 64137407
TI CONTOUR BRAIN SCANNING WITH IODINE AND MERCURY COMPOUNDS FOR DETECTION OF INTRACRANIAL TUMORS.
AU FEINDEL W; YAMAMOTO Y L; MCRAE D L; ZANELLI J
SO AMERICAN JOURNAL OF ROENTGENOLOGY, RADIUM THERAPY AND NUCLEAR MEDICINE, (1964 JUL) 92 177-86.
ISSN: 0002-9580.
CY United States
DT Journal
LA English

FS OLDMEDLINE
EM 196411
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST angiosarcoma; **arsenicals**; bismuth; **brain neoplasms**; chlormerodrin; diuretics, mercurial; glioma; **meningioma**; neoplasm diagnosis; radioisotope scanning; radioisotopes; serum albumin, radio-iodinated; statistics

L8 ANSWER 111 OF 123 MEDLINE on STN
AN 64096571 MEDLINE
DN 64096571
TI [POSSIBILITIES AND LIMITATIONS OF RADIOISOTOPES (CU-64 AND AS-74) IN THE DIAGNOSIS OF **BRAIN TUMORS**].
MOEGLICHKEITEN UND GRENZEN DER HIRNTUMORDIAGNOSTIK MIT POSITRONENSTRAHLERN (CU 64 UND AS 74).
AU WILCKE O
SO NEUROCHIRURGIA, (1964 FEB) 108 33-41.
ISSN: 0028-3819.
CY GERMANY: Germany, Federal Republic of
DT Journal
LA German
FS OLDMEDLINE
EM 196408
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI [POSSIBILITIES AND LIMITATIONS OF RADIOISOTOPES (CU-64 AND AS-74) IN THE DIAGNOSIS OF **BRAIN TUMORS**].
MOEGLICHKEITEN UND GRENZEN DER HIRNTUMORDIAGNOSTIK MIT POSITRONENSTRAHLERN (CU 64 UND AS 74).
ST **arsenic**; **astrocytoma**; brain abscess; **brain neoplasms**; brain stem; carcinoma, epidermoid; copper; craniopharyngioma; **ependymoma**; frontal lobe; **glioblastoma** multiforme; **meningioma**; neoplasm diagnosis; neoplasm metastasis; neurilemmoma; **oligodendroglioma**; radioisotope scanning
RN **7440-38-2 (ARSENIC)**; 7440-50-8 (COPPER)

L8 ANSWER 112 OF 123 MEDLINE on STN
AN 64123514 MEDLINE
DN 64123514
TI CEREBRAL SCANNING.
AU FARRER P A
SO BULL POSTGRAD COMM MED UNIV SYDNEY, (1964 APR) 20 20-8.
CY Australia
DT Journal
LA English
FS OLDMEDLINE
EM 196410
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST **arsenic**; **brain neoplasms**; neoplasm diagnosis; radioisotope scanning
RN **7440-38-2 (ARSENIC)**

L8 ANSWER 113 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1964:4557 CAPLUS
DN 60:4557
OREF 60:837a
TI Radioisotope localization techniques
AU Mallard, J. R.
CS Hammersmith Hosp., London
SO Proc. Roy. Soc. Med. (1963), 56(8), 680-6
DT Journal

LA Unavailable
AB The localization of 72As and 74As is considered for **brain tumors**. The isotopes may be used without adverse side-effects. A description is given of a "gamma camera," an app. for measuring .gamma.-rays from radioiodine-labeled albumin. 22 references.
AB The localization of 72As and 74As is considered for **brain tumors**. The isotopes may be used without adverse side-effects. A description is given of a "gamma camera," an app. for measuring .gamma.-rays from radioiodine-labeled albumin. 22 references.
IT 7440-38-2, **Arsenic**
(isotopes of masses 72 and 74, localization of, in neoplasms)

L8 ANSWER 114 OF 123 MEDLINE on STN
AN 64066104 MEDLINE
DN 64066104
TI [INVESTIGATIONS ON THE DISTRIBUTION OF RADIOISOTOPES USED FOR **BRAIN TUMOR** DIAGNOSIS IN THE BLOOD CIRCULATION, IN EXPERIMENTAL **TUMORS** AND HUMAN **BRAIN TUMORS**].
UNTERSUCHUNGEN UEBER DIE VERTEILUNG DER ZUR HIRNTUMORDIAGNOSTIK VERWENDETEN RADIOISOTOPE IN DER BLUTBAHN, IN EXPERIMENTELLEN TUMOREN UND MENSCHLICHEN HIRNGESCHWUELSTEN.
AU MUNDINGER F; GERHARD H
SO ACTA NEUROCHIRURGICA, (1963 NOV 21) 11 398-415.
ISSN: 0001-6268.
CY Austria
DT Journal
LA German
FS OLDMEDLINE
EM 196406
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI [INVESTIGATIONS ON THE DISTRIBUTION OF RADIOISOTOPES USED FOR **BRAIN TUMOR** DIAGNOSIS IN THE BLOOD CIRCULATION, IN EXPERIMENTAL **TUMORS** AND HUMAN **BRAIN TUMORS**].
UNTERSUCHUNGEN UEBER DIE VERTEILUNG DER ZUR HIRNTUMORDIAGNOSTIK VERWENDETEN RADIOISOTOPE IN DER BLUTBAHN, IN EXPERIMENTELLEN TUMOREN UND MENSCHLICHEN HIRNGESCHWUELSTEN.
ST **arsenic**; bismuth; **brain neoplasms**;
carcinoma, ehrlich tumor; copper; edta; experimental lab study; iodine isotopes, diagnostic; mercury; neoplasms, experimental; radioisotopes; sarcoma, yoshida
RN 7439-97-6 (MERCURY); **7440-38-2 (ARSENIC)**; 7440-50-8 (COPPER); 7553-56-2 (IODINE)

L8 ANSWER 115 OF 123 MEDLINE on STN
AN 62136148 MEDLINE
DN 62136148
TI Radioactive **arsenic** in the diagnosis of intracranial tumours.
AU FARRER P A; McRAE J
SO Aust Ann Med, (1963 May) 12 93-101.
DT Journal
LA English
FS OLDMEDLINE
EM 196312
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI Radioactive **arsenic** in the diagnosis of intracranial tumours.
ST **arsenic**; **brain neoplasms**
RN **7440-38-2 (ARSENIC)**

L8 ANSWER 116 OF 123 MEDLINE on STN
AN 62166851 MEDLINE
DN 62166851
TI New chemotherapy for malignant neoplasms of the nervous system.

AU ROSNER S
SO J Int Coll Surg, (1963 Jan) 39 55-61.
DT Journal
LA English
FS OLDMEDLINE
EM 196312
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST **arsenicals; brain neoplasms;**
polysaccharides, bacterial; spinal neoplasms

L8 ANSWER 117 OF 123 MEDLINE on STN
AN 64071022 MEDLINE
DN 64071022
TI [RADIOACTIVE ISOTOPES IN THE NEUROLOGICAL DIAGNOSIS].
IS'OTOPOS RADIACTIVOS EN EL DIAGN'OSTICO NEUROL'OGICO.
AU ORTIZBERROCAL J
SO REVISTA CLINICA ESPANOLA, (1963 OCT 15) 91 1-11.
ISSN: 0014-2565.
CY Spain
DT Journal
LA Spanish
FS OLDMEDLINE
EM 196406
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST **arsenic**; bismuth; boron; **brain neoplasms;**
copper; fluoresceins; fluorine; iodine isotopes, diagnostic; mercury;
neoplasm diagnosis; potassium isotopes; radioisotope scanning;
radioisotopes; review; rubidium; serum albumin, radio-iodinated
RN 7439-97-6 (MERCURY); 7440-09-7 (POTASSIUM); 7440-17-7 (RUBIDIUM);
7440-38-2 (ARSENIC); 7440-42-8 (BORON); 7440-50-8 (COPPER);
7553-56-2 (IODINE); 7782-41-4 (FLUORINE); 9048-46-8 (SERUM ALBUMIN)

L8 ANSWER 118 OF 123 MEDLINE on STN
AN 62133655 MEDLINE
DN 62133655
TI An appraisal of As-74 for localization of **brain tumours**
.
AU PAUL W; BOTTERELL E H
SO J Nucl Med, (1963 Jan) 4 1-8.
DT Journal
LA English
FS OLDMEDLINE
EM 196312
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI An appraisal of As-74 for localization of **brain tumours**
.
ST **arsenic; brain neoplasms;** radiometry
RN **7440-38-2 (ARSENIC)**

L8 ANSWER 119 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1963:464982 CAPLUS
DN 59:64982
OREF 59:12030g-h
TI External localization of focal intracranial disease employing
positron-emitting isotopes
AU Sweet, William H.
CS Massachusetts Gen. Hosp., Boston
SO U.S. At. Energy Comm. (1962), Volume TID-15818, 32 pp.
From: Nucl. Sci. Abstr. 16(17), Abstr. No. 21879(1962).
DT Report
LA Unavailable

AB The use of isotopic tracer methods in studies of the brain is discussed. The basic technique for localization of focal intracranial disease by using a positron scanner on each side of the head to detect the 2 annihilation quanta from positron-electron interactions is described. The advantages of positron scanning include high sensitivity at high resoln., very low background effects, uniform response, and As74 appears to be preferable to most materials used for external **brain tumor** localization. The advantages and disadvantages of radioactive isotopes of As, Cu, F, Rb, Zr, I, and Ga were studied. Direct clin. applications of positron scanning are discussed.

AB The use of isotopic tracer methods in studies of the brain is discussed. The basic technique for localization of focal intracranial disease by using a positron scanner on each side of the head to detect the 2 annihilation quanta from positron-electron interactions is described. The advantages of positron scanning include high sensitivity at high resoln., very low background effects, uniform response, and As74 appears to be preferable to most materials used for external **brain tumor** localization. The advantages and disadvantages of radioactive isotopes of As, Cu, F, Rb, Zr, I, and Ga were studied. Direct clin. applications of positron scanning are discussed.

IT 7440-38-2, **Arsenic**
(isotope of mass 74, as indicator of brain disease)

L8 ANSWER 120 OF 123 MEDLINE on STN
AN 62171493 MEDLINE
DN 62171493
TI External localization of intracranial lesions with radioactive isotopes.
AU SWEET W H; ARONOW S; BROWNELL G L
SO Schweiz Med Wschr, (1962 Dec 1) 92 1545-50.
DT Journal
LA English
FS OLDMEDLINE
EM 196312
ED Entered STN: 19990716
Last Updated on STN: 19990716
ST **arsenic**; **brain neoplasms**; copper; radioisotopes; radiometry
RN **7440-38-2 (ARSENIC)**; 7440-50-8 (COPPER)

L8 ANSWER 121 OF 123 MEDLINE on STN
AN 62198841 MEDLINE
DN 62198841
TI **Brain tumor** diagnosis with positron rays.
AU WILCKE O
SO Acta Neurochir (Wien), (1962 May 28) 10 301-19.
DT Journal
LA German
FS OLDMEDLINE
EM 196212
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI **Brain tumor** diagnosis with positron rays.
ST **arsenic** - radioactive; copper - radioactive; radiometry
RN **7440-38-2 (ARSENIC)**; 7440-50-8 (COPPER)

L8 ANSWER 122 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 32
AN 1959:52556 CAPLUS
DN 53:52556
OREF 53:9483h-i,9484a
TI Radioarsenic in plasma, urine, normal tissues, and intracranial neoplasms. Distribution and turnover after intravenous injection in man
AU Mealey, John, Jr.; Brownell, Gordon L.; Sweet, William H.
CS Massachusetts Gen. Hosp., Boston
SO A.M.A. Arch. Neurol. Phychiat. (1959), 81, 310-20

DT Journal
LA Unavailable
AB As74 serially assayed in the plasma subsequent to administration of labeled **arsenite** reflected the complex metabolism of the ion. The concn. curve can be represented as the sum of the 3 exponential components, the last representing rate of excretion from a tenaciously held small residual pool of As. Activity in the urine was found as both **arsenate** and **arsenite**. Assays of As concn. showed a decreasing **tumor/brain** ratio as **meningiomas**, **glioblastomas**, metastatic **tumors**, and **astrocytomas**. As74 was found in all body tissues at autopsies from 1 hr. to 71 days after injection. Radiation dosage to various tissues for diagnostic scanning has been calcd.
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IT Urine
(**arsenic** in)
IT Blood plasma
(**arsenic** in, after **arsenite** administration)
IT Neoplasms
(**arsenic** metabolism in intracranial)
IT 7440-38-2, **Arsenic**
(metabolism of)

L8 ANSWER 123 OF 123 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1956:91414 CAPLUS
DN 50:91414
OREF 50:17185e-g
TI Radioactive isotopes and nuclear radiations in the treatment of cancer
AU Lawrence, John H.; Tobias, Cornelius A.
CS Univ. of California, Berkeley
SO Cancer Research (1956), 16, 185-93
CODEN: CNREA8; ISSN: 0008-5472
DT Journal
LA Unavailable
AB Radioactive isotopes of established therapeutic value are P32 in polycythemia vera and I131 in hyperplasia and cancers of the thyroid. Other applications reviewed include B10 in **glioblastoma** multiforme, Na24 in bladder carcinoma, P32 in leukemia, metastatic peritoneal and pleural carcinoma, cancer of the breast, prostate, cervix, and lung, hyperkeratosis, and basal cell and squamous cell carcinoma, Cl38 in ovarian carcinoma, Co60 in deep-seated tumors, tumors of the maxilla and nasopharynx, and cancer of the bladder, esophagus, uterus, prostate, cervix, and lung, Br82 in bladder carcinoma, Kr87 in ovarian carcinoma, Sr90 in pterygium, vernal conjunctivitis, and vascularization of cornea, Y90 in hepatomegaly and splenomegaly of leukemia, I131 in heart disorders, and Au198 in carcinoma of the prostate, cervix, and lung, and in ascites. 59 references.
AB Radioactive isotopes of established therapeutic value are P32 in polycythemia vera and I131 in hyperplasia and cancers of the thyroid. Other applications reviewed include B10 in **glioblastoma** multiforme, Na24 in bladder carcinoma, P32 in leukemia, metastatic peritoneal and pleural carcinoma, cancer of the breast, prostate, cervix, and lung, hyperkeratosis, and basal cell and squamous cell carcinoma, Cl38 in ovarian carcinoma, Co60 in deep-seated tumors, tumors of the maxilla

and nasopharynx, and cancer of the bladder, esophagus, uterus, prostate, cervix, and lung, Br82 in bladder carcinoma, Kr87 in ovarian carcinoma, Sr90 in pterygium, vernal conjunctivitis, and vascularization of cornea, Y90 in hepatomegaly and splenomegaly of leukemia, I131 in heart disorders, and Au198 in carcinoma of the prostate, cervix, and lung, and in ascites. 59 references.

IT 59-52-9, 1-Propanol, 2,3-dimercapto-
(in **arsenic** poisoning treatment)

FILE 'CAPLUS, WPIDS, MEDLINE, EMBASE, CANCERLIT' ENTERED AT 15:27:59 ON 11 SEP 2003

L1 340109 S ARSEN?
L2 173223 S (BRAIN# OR CRANIAL OR SPINAL CORD OR CENTRAL NERVOUS SYSTEM O
L3 194467 S NEUROBLASTOM? OR RETINOBLASTOM? OR GLIOBLASTOM? OR OLIGODENDR
L4 283 S L1 AND (L2 OR L3)
L5 114 S L1 (50A) (L2 OR L3)
L6 58 DUP REM L5 (56 DUPLICATES REMOVED)
L7 169 S L4 NOT L5
L8 123 DUP REM L7 (46 DUPLICATES REMOVED)

FILE 'STNGUIDE' ENTERED AT 15:41:07 ON 11 SEP 2003

FILE 'CAPLUS, WPIDS, MEDLINE, EMBASE, CANCERLIT' ENTERED AT 15:46:55 ON 11 SEP 2003

=> d que l6; d que l8
L1 340109 SEA ARSEN?
L2 173223 SEA (BRAIN# OR CRANIAL OR SPINAL CORD OR CENTRAL NERVOUS SYSTEM OR CNS) (5A) (CANCER? OR TUMOR? OR TUMOUR? OR NEOPLAS? OR MALIGNA?)
L3 194467 SEA NEUROBLASTOM? OR RETINOBLASTOM? OR GLIOBLASTOM? OR OLIGODENDROGLIOM? OR MENINGIOM? OR (MENING? (2A) (CARCINOM? OR CANCER? OR TUMOR?)) OR ASTROCYTOM? OR EPENDYMOM? OR OLIGODENDRO CYTOM?
L5 114 SEA L1 (50A) (L2 OR L3)
L6 58 DUP REM L5 (56 DUPLICATES REMOVED)

L1 340109 SEA ARSEN?
L2 173223 SEA (BRAIN# OR CRANIAL OR SPINAL CORD OR CENTRAL NERVOUS SYSTEM OR CNS) (5A) (CANCER? OR TUMOR? OR TUMOUR? OR NEOPLAS? OR MALIGNA?)
L3 194467 SEA NEUROBLASTOM? OR RETINOBLASTOM? OR GLIOBLASTOM? OR OLIGODENDROGLIOM? OR MENINGIOM? OR (MENING? (2A) (CARCINOM? OR CANCER? OR TUMOR?)) OR ASTROCYTOM? OR EPENDYMOM? OR OLIGODENDRO CYTOM?
L4 283 SEA L1 AND (L2 OR L3)
L5 114 SEA L1 (50A) (L2 OR L3)
L7 169 SEA L4 NOT L5
L8 123 DUP REM L7 (46 DUPLICATES REMOVED)

L1	340109	SEA ARSEN?
L2	173223	SEA (BRAIN# OR CRANIAL OR SPINAL CORD OR CENTRAL NERVOUS SYSTEM OR CNS) (5A) (CANCER? OR TUMOR? OR TUMOUR? OR NEOPLAS? OR MALIGNA?)
L3	194467	SEA NEUROBLASTOM? OR RETINOBLASTOM? OR GLIOBLASTOM? OR OLIGODENDROGLIOM? OR MENINGIOM? OR (MENING? (2A) (CARCINOM? OR CANCER? OR TUMOR?)) OR ASTROCYTOM? OR EPENDYMOM? OR OLIGODENDRO CYTOM?
L5	114	SEA L1 (50A) (L2 OR L3)
L6	58	DUP REM L5 (56 DUPLICATES REMOVED)

L6 ANSWER 1 OF 58 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 2003-449178 [42] WPIDS
DNC C2003-119200
TI Use of 4-aryl-4-piperidinecarbinols for treating neuropathic dysfunction and neuropathic pain.
DC B02 B03
IN CARLISS, R; LEE, D A H
PA (CARL-I) CARLISS R; (LEED-I) LEE D A H; (ENDO-N) ENDO PHARM INC
CYC 101
PI WO 2003032910 A2 20030424 (200342)* EN 65p
RW: AT BE BG CH CY CZ DE DK EA EE ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SK SL SZ TR TZ UG ZM ZW
W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW
US 2003162811 A1 20030828 (200357)
ADT WO 2003032910 A2 WO 2002-US32960 20021016; US 2003162811 A1 Provisional US 2001-329869P 20011016, US 2002-272375 20021016
PRAI US 2001-329869P 20011016; US 2002-272375 20021016
AB WO2003032910 A UPAB: 20030703
NOVELTY - Treatment of neuropathic pain involves administering 4-aryl-4-piperidinecarbinols (I) or (II).

DETAILED DESCRIPTION - Treatment of neuropathic pain involves administering 4-aryl-4-piperidinecarbinols of formula (I) or (II) or their salts or N-oxides.

m = 1-3;

R1 = CH3, C2H5, n-C3H7 or allyl; or

R1+R2 = 3-4C alkylene;

R2, R3 = H or 1-4C alkyl; or

R2+R3 = 3-6C alkylene;

R4 = phenyl (optionally substituted by X), 2-, 3- or 4-biphenyl (optionally substituted by 1-2 F, Cl, 1-12C alkyl, 1-12C perfluoroalkyl, 1-12C alkoxy, aryloxy, 1-12C alkylthio, 1-12C perfluoroalkoxy, 6-12C arylthio, 1-12C perfluoroalkylthio or di(1-12C alkyl)amino), 1- or 2-naphthyl (optionally substituted by 1-2 X), 2-, 3- or 4-pyridyl or 2-, 3- or 4-pyrrolyl (optionally substituted by 1-3 1-4C alkyl), 2- or 3-thienyl (optionally substituted by Cl, Br or 1-4C alkyl) or 2- or 3-benzothienyl or benzofuryl (optionally substituted by Cl, Br or CF3);

X = F, Cl, Br, 1-12C perfluoroalkyl, 1-12C alkyl, 1-12C alkylamino, di(1-12C alkyl)amino, 1-12C alkylthio, alkoxy or phenoxy;

R5 = 1-4C alkyl; or

R5+R6 = optionally branched 3-11C alkylene;

R6 = H or 1-4C alkyl;

R7 = H, 1-4C alkyl, 1-4C alkanoyl or benzyl;

X1, X2 = O or NR'2;

R'1 = H, alkyl, 1-6C alkyl (optionally substituted), alkenyl, alkynyl, acyl, C(O)R'5, C(O)NR'5R'6, C(O)OR'5, C(O)SR'5, C(S)R'5, C(S)NR'5R'6, C(S)OR'5, C(S)SR'5, C(NR'7)R'5, C(NR'7)R'5R'6, C(NR'7)OR'5, C(NR'7)SR'5 or phosphate; and

R'2, R'5-R'7 = H or alkyl;

provided that:

(i) when R1, R5, R6 = Me and R2, R3 = H then R4 is not 3,4-F2C6H3, 3,4-Cl2C6H3, para-t-butylphenyl, 2,3-(MeO)2C6H3, 2,5-(MeO)2C6H3 or 3-pyridyl; and

(ii) when R1, R5, R6 = Me or R5+R6 = -(CH2)6 or -(CH2)7, then R4 is not 3-(MeO)C6H4.

ACTIVITY - Analgesic; Neuroprotective.

MECHANISM OF ACTION - Serotonin Uptake Inhibitor; Norepinephrine Uptake Inhibitor; Dopamine Uptake Inhibitor; Ectopic Discharge Inhibitor. In tests, 4-(3'-thienyl)- alpha , alpha ,1-trimethyl-4-piperidinemethanol (IIa) inhibited rat synaptosomal 5-HT and NE reuptake with IC50 values of

120 and 223 nM, respectively.

USE - (I) And (II) are useful for the treatment and prophylaxis of neuropathic pain caused by carpal tunnel syndrome, cervical or lumbar radiculopathy, complex regional pain syndrome, spinal cord injury, stump pain, metabolic or toxic disease, endocrinologic disorder (e.g. diabetes mellitus, diabetic neuropathy, amyloidosis and amyloid polyneuropathy), malignant tumor, eosinophilia-myalgia syndrome, monoclonal gammopathy, multiple sclerosis, stroke, postherpetic neuralgia, neuropathy with monoclonal protein, vasculitic neuropathy, neuropathy associated with Guillain-Barre syndrome, neuropathy associated with Fabry's disease, entrapment due to anatomic abnormality, trigeminal, **CNS** neuralgia, **malignancy**, inflammatory condition, autoimmune disorder (e.g. demyelinating inflammatory disorder, rheumatoid arthritis, systemic lupus erythematosus and Sjogren's syndrome), iodopathic distal small-fiber neuropathy, toxin and drug (e.g. **arsenic**, lead, mercury, thallium, alcohol), vincristine, cisplatinum and dideoxynucleoside), dietary or absorption, abnormality, immuno-globulinemia, hereditary abnormality, mastectomy, amputation, viral infection (e.g. HIV infection or herpes) in human (claimed); also for treating neuropathic dysfunction.

ADVANTAGE - (I) And (II) do not show significant activity at mu , kappa, delta or sigma receptor sites in the brain; does not inhibit prostaglandin synthetase; does not exhibit an antiinflammatory effect in vivo; do not exhibit anticholinergic side effects, sedation or motor impairment; lacks additive or respiratory depressant properties; and inhibit ectopic discharge in the peripheral nervous system pathway, in the dorsal-root-ganglion cells of damaged afferent axons.

Dwg.0/6

AB . . .

monoclonal protein, vasculitic neuropathy, neuropathy associated with Guillain-Barre syndrome, neuropathy associated with Fabry's disease, entrapment due to anatomic abnormality, trigeminal, **CNS** neuralgia, **malignancy**, inflammatory condition, autoimmune disorder (e.g. demyelinating inflammatory disorder, rheumatoid arthritis, systemic lupus erythematosus and Sjogren's syndrome), iodopathic distal small-fiber neuropathy, toxin and drug (e.g. **arsenic**, lead, mercury, thallium, alcohol), vincristine, cisplatinum and dideoxynucleoside), dietary or absorption, abnormality, immuno-globulinemia, hereditary abnormality, mastectomy, amputation, viral infection (e.g.. . .

L6 ANSWER 2 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 1

AN 2002:404160 CAPLUS

DN 138:100589

TI Involvement of microtubules and mitochondria in the antagonism of arsenic trioxide on paclitaxel-induced apoptosis

AU Carre, Manon; Carles, Gerard; Andre, Nicolas; Douillard, Soazig; Ciccolini, Joseph; Briand, Claudette; Braguer, Diane

CS Faculty of Pharmacy, UMR CNRS 6032, University of La Mediterranee, Marseille, 13005, Fr.

SO Biochemical Pharmacology (2002), 63(10), 1831-1842
CODEN: BCPCA6; ISSN: 0006-2952

PB Elsevier Science Inc.

DT Journal

LA English

AB Arsenic trioxide (As2O3) at low concns. (1-10 .mu.M) is effective in the treatment of acute promyelocytic leukemia (APL) and lymphoma and is in clin. trials for treatment of solid tumors. Paclitaxel, an antimicrotubule agent, is highly efficacious in the treatment of adult tumors and is in clin. evaluation in childhood tumors. This study is the first to investigate the combination of arsenic and paclitaxel in the range of clin. achievable concns. We found that the simultaneous combination was antagonistic on proliferation of the neuroblastoma SK-N-SH cell line by using the combination index (CI) method. Moreover, a

40.+-.5% decrease in paclitaxel-induced apoptosis in cells co-treated with As2O3 confirmed the antagonism. The mechanism of antagonism was studied at the cellular level with 200 nM paclitaxel, twice the ic50 value, and with 1 .mu.M As2O3 which administered singly did not affect cell survival or the microtubule network. As2O3 antagonized the effects of paclitaxel on tubulin and microtubules. Paclitaxel-induced mitotic block was decreased by 20.+-.2% and bundles induced by 200 nM paclitaxel were less condensed in the presence of 1 .mu.M As2O3. As2O3 (10-200 .mu.M) induced a concn.-dependent inhibition of tubulin polymn. in vitro which was maintained in presence of paclitaxel. Spectrophotometric and spectrofluorometric measurements indicated an interaction of As2O3 with tubulin SH groups, without modification of the stoichiometry of paclitaxel binding to tubulin. Moreover, 4 .mu.M As2O3 inhibited the release of cytochrome c from isolated mitochondria by 78.+-.10%. Our results show that As2O3 and paclitaxel act antagonistically on mitochondria and microtubules and illustrate the need for careful evaluation of drug combinations.

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ST microtubules mitochondria **arsenic** trioxide antagonism paclitaxel apoptosis **neuroblastoma** child

IT Nerve, neoplasm
(**neuroblastoma**; microtubules and mitochondria involvement in **arsenic** trioxide antagonism of antimicrotubule agent paclitaxel-induced apoptosis)

L6 ANSWER 3 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:598900 CAPLUS

DN 137:314973

TI Cancer of the brain and nervous system and occupational exposures in Finnish women

AU Wesseling, Catharina; Pukkala, Eero; Neuvonen, Kaisa; Kauppinen, Timo; Boffetta, Paolo; Partanen, Timo

CS Department of Epidemiology and Biostatistics, Finnish Institute of Occupational Health, Helsinki, Finland

SO Journal of Occupational and Environmental Medicine (2002), 44(7), 663-668
CODEN: JOEMFM; ISSN: 1076-2752

PB Lippincott Williams & Wilkins

DT Journal

LA English

AB In 1970, occupational agents were evaluated for the risk of brain-nervous system cancer in a cohort of 413,877 Finnish women with blue-collar occupations. Obsd. and expected nos. of incident cases and the intensity of exposure to 25 agents were generated for 183 job titles from 1971 to 1995. Poisson regression models linked incidence and exposure data. Increased risks were found for medium/high intensity of Fe (standardized incidence ratio [SIR], 2.15; 95% confidence interval [CI], 0.96-4.80), oil mist (1.95; 0.97-3.90), any Cr compds. (1.51; 0.85-2.67), electromagnetic fields (1.37; 0.98-2.10), aliph. and alicyclic hydrocarbons (1.34; 0.80-2.27), Pb (1.27; 0.81-2:01), Cd (1.26; 0.72-2.22), and arom. hydrocarbon compds. (1.20; 0.71-2.03). Study strengths included fair no. of cases, virtually complete case coverage, and a high-quality job exposure matrix. Ecol. design and cross-sectional job assessment introduced exposure misclassification and tended to drive risk ests. toward unity.

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 50-00-0, Formaldehyde, biological studies 7439-89-6, Iron, biological studies 7439-92-1, Lead, biological studies 7440-02-0, Nickel, biological studies 7440-38-2, **Arsenic**, biological studies 7440-43-9, Cadmium, biological studies 7440-47-3D, Chromium, compds.
RL: ADV (Adverse effect, including toxicity); TEM (Technical or engineered material use); BIOL (Biological study); USES (Uses)
(**brain** and nervous system **cancer** in relation to

occupational exposure to inorg. and org. compds. and electromagnetic fields in blue collar job women in Finland)

L6 ANSWER 4 OF 58 MEDLINE on STN DUPLICATE 2
AN 2002450996 MEDLINE
DN 22196653 PubMed ID: 12210690
TI Occupation, exposure to chemicals and risk of gliomas and meningiomas in Sweden.
AU Navas-Acien Ana; Pollan Marina; Gustavsson Per; Plato Nils
CS Cancer and Environmental Epidemiology Area, National Center for Epidemiology, Carlos III Institute of Health, Madrid, Spain.
SO AMERICAN JOURNAL OF INDUSTRIAL MEDICINE, (2002 Sep) 42 (3) 214-27. Journal code: 8101110. ISSN: 0271-3586.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200210
ED Entered STN: 20020906
Last Updated on STN: 20021011
Entered Medline: 20021010
AB BACKGROUND: Occupational exposures may be related to the development of brain cancer. The objective was to estimate occupational-specific risk of gliomas and meningiomas among Swedish men and women gainfully employed in 1970 over the period 1971-1989, and the influence of occupational exposure to chemical substances. METHODS: A dataset linking cancer diagnoses from the Swedish national cancer register to occupational and demographical data obtained in the 1970 census was used to fit log-linear Poisson models, in order to obtain relative risks adjusted by age, period, geographical area and town size. Exposure to 13 chemicals was assessed using a Swedish job-exposure matrix. RESULTS: The main findings of this study among men were the increased risk of glioma with occupational exposure to **arsenic**, mercury, and petroleum products and of **meningioma** with lead. Women in occupational sectors with a higher socio-economic status showed an increased incidence of both, gliomas and meningiomas. CONCLUSIONS: Occupational exposure to some chemicals appeared to be related with an increased risk of glioma and meningioma in men. Exposures involved in glioma and meningioma development seemed to be different.

AB . . . matrix. RESULTS: The main findings of this study among men were the increased risk of glioma with occupational exposure to **arsenic** , mercury, and petroleum products and of **meningioma** with lead. Women in occupational sectors with a higher socio-economic status showed an increased incidence of both, gliomas and meningiomas.. . .

L6 ANSWER 5 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:526262 CAPLUS
DN 138:83046
TI Effect of As2O3 on cell cycle progression and cyclins D1 and B1 expression in two glioblastoma cell lines differing in p53 status
AU Zhao, Shiguang; Tsuchida, Takahiro; Kawakami, Katsuhiro; Shi, Changbin; Kawamoto, Keiji
CS Department of Neurosurgery, Kansai Medical University, Osaka, 570-8506, Japan
SO International Journal of Oncology (2002), 21(1), 49-55
CODEN: IJONES; ISSN: 1019-6439
PB International Journal of Oncology
DT Journal
LA English
AB Recent clin. studies have demonstrated that As2O3 is an effective drug in the treatment of acute promyelocytic leukemia (APL) by inducing apoptosis and inhibiting the proliferation of leukemia cells both in vitro and in vivo. As a novel anticancer agent for the treatment of solid cancer,

As2O3 is promising, but no exptl. investigations of its efficacy on glioblastoma have been conducted at concns. that may be achieved clin. In addn., the cell proliferation and cell cycle regulating mechanism of As2O3 has not yet to be clarified, esp. in solid cancers. We investigated the effect of As2O3 on proliferation and cell cycle regulation with change in cyclins in two human glioblastoma cell lines differing in p53 status (U87MG-wt; T98G-mutated). Sensitivity to As2O3 varied depending on the dose with the IC50 of the U87MG and T98G cells being 1.78 and 3.55 .mu.M, resp. Anal. by laser scanning cytometry (LSC) indicated that As2O3 inhibited the proliferation of the two cell lines via cell cycle arrest both at the G1 and G2 phases. To address the mechanism of the antiproliferative effect of As2O3, we examd. its effect on cell cycle-related proteins by means of LSC, confocal microscopy and Western blot anal. As2O3 induced an increase in p53 level and a decrease in level of cyclin B1 combined with cell arrest at G2/M in both cell lines. Cell arrest in G1, however, was assocd. with a decline in cyclin D1 expression only in the wt U87MG cells. As2O3 also induced apoptosis of U87MG cells as evidenced by the presence of cells with fractional DNA content ("sub-G1" cell populations). The present evidence that As2O3 at relatively low concn. effectively inhibited proliferation of U87MG and T98G cells in vitro, suggests that the drug may be considered for in vivo testing on animal models and possibly clin. trials on glioma patients.

RE.CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

ST **Arsenic** trioxide cell cycle cyclin **glioblastoma** p53 antitumor

IT 1327-53-3, **Arsenic** oxide (As2O3)
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(effect of As2O3 on cell cycle progression and cyclins D1 and B1 expression in two **glioblastoma** cell lines differing in p53 status)

L6 ANSWER 6 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:565431 CAPLUS
DN 138:299964
TI Probing brain cancer by fiber optic FTIR spectroscopy
AU Steiner, Gerald; Kano, Angelique; Richter, Tom; Bergmann, Ralph; Rodig, Heike; Kobelke, Jens; Johannsen, Bernd; Salzer, Reiner
CS Inst. for Analytical Chem., Univ. of Tech., Dresden, D-01062, Germany
SO Proceedings of SPIE-The International Society for Optical Engineering (2002), 4616(Optical Fibers and Sensors for Medical Applications II), 40-46
CODEN: PSISDG; ISSN: 0277-786X
PB SPIE-The International Society for Optical Engineering
DT Journal
LA English
AB The use of several silver halide and chalcogenide IR transmitting fibers in the detection of cancer is investigated. As a test sample for all types of fibers we used a thin section of an entire rat brain with glioblastoma. Moving the sample with an XY stage maps across the whole tissue section with more than 200 spectra were recorded. Data evaluation was performed using Principal Components Anal. (PCA). The silver halide fibers have provided excellent results. The tumor was clearly differentiable from the normal tissue. It was not possible to identify the tumor region using chalcogenide fibers because the fiber has a very low transmittance in the important fingerprint region.

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT 1303-33-9, **Arsenic** trisulfide 510707-34-3 510707-36-5, **Arsenic** selenide sulfide (As8Se7S5) 510707-37-6
RL: ARG (Analytical reagent use); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(IR optical fiber; comparison of silver halide and chalcogenide IR

transmitting fibers for probing **brain cancer** by fiber optic FTIR spectroscopy)

L6 ANSWER 7 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 3
AN 2001:294549 CAPLUS
DN 135:220778
TI Alteration of nuclear matrix protein composition of **neuroblastoma** cells after **arsenic** trioxide treatment
AU Wang, Z. H.; Yu, D.; Li, H. K.; Chow, V. W.; Ng, C. C.; Chan, H. B.; Cheng, S. B.; Chew, E. C.
CS Departments of Anatomy, The Chinese University of Hong Kong, Hong Kong, Peop. Rep. China
SO Anticancer Research (2001), 21(1A), 493-498
CODEN: ANTRD4; ISSN: 0250-7005
PB International Institute of Anticancer Research
DT Journal
LA English
AB The aims of the present study were to assess the effects of **arsenic** trioxide on the nuclear matrix protein profiles of mouse **neuroblastoma** cells. Arsenic trioxide induces apoptosis of acute promyelocytic leukemia cells. Our results demonstrated that 2.mu.M As2O3 could significantly inhibit the growth of Neuro-2a cells. As early as 24 h after As2O3 treatment, we began to observe the alteration of nuclear matrix proteins and apoptosis in tumor cells by TUNEL assay but not by DNA ladder. An increase expression of Hsc in nuclear matrix proteins of 2.mu.M As2O3 treated cells was also noted. Our results also showed that before a mass range of apoptosis occurred, the compn. of nuclear matrix proteins had altered. Hence the alteration of nuclear matrix proteins, such as increased expression of Hsc, may be a sensitive indicator for the detection of early apoptosis.
RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
TI Alteration of nuclear matrix protein composition of **neuroblastoma** cells after **arsenic** trioxide treatment
AB The aims of the present study were to assess the effects of **arsenic** trioxide on the nuclear matrix protein profiles of mouse **neuroblastoma** cells. Arsenic trioxide induces apoptosis of acute promyelocytic leukemia cells. Our results demonstrated that 2.mu.M As2O3 could significantly inhibit the growth of Neuro-2a cells. As early as 24 h after As2O3 treatment, we began to observe the alteration of nuclear matrix proteins and apoptosis in tumor cells by TUNEL assay but not by DNA ladder. An increase expression of Hsc in nuclear matrix proteins of 2.mu.M As2O3 treated cells was also noted. Our results also showed that before a mass range of apoptosis occurred, the compn. of nuclear matrix proteins had altered. Hence the alteration of nuclear matrix proteins, such as increased expression of Hsc, may be a sensitive indicator for the detection of early apoptosis.
ST nuclear matrix protein **neuroblastoma arsenic** trioxide apoptosis
IT Apoptosis
Cell nucleus
(alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)
IT Phosphoproteins
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)
(hsc 70 (heat-shock cognate, 70,000-mol.-wt.); alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)
IT Proteins, specific or class
RL: BOC (Biological occurrence); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence); PROC (Process)

(matrix; alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)

IT Nerve, neoplasm
(**neuroblastoma**, inhibitors; alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)

IT Antitumor agents
(**neuroblastoma**; alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)

IT 1327-53-3, **Arsenic** trioxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(alteration of nuclear matrix protein compn. of **neuroblastoma** cells after **arsenic** trioxide treatment)

L6 ANSWER 8 OF 58 CANCERLIT on STN
AN 2002080152 CANCERLIT
DN 21471002 PubMed ID: 11587371
TI Arsenic compounds as anticancer agents.
AU Wang Z Y
CS Shanghai Institute of Hematology, Rui-jin Hospital, Shanghai Second Medical University, People's Republic of China.
SO CANCER CHEMOTHERAPY AND PHARMACOLOGY, (2001 Aug) 48 Suppl 1 S72-6. Ref: 28
Journal code: 7806519. ISSN: 0344-5704.
CY Germany: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LA English
FS MEDLINE; Priority Journals
OS MEDLINE 2001540685
EM 200110
ED Entered STN: 20020726
Last Updated on STN: 20020726
AB In this paper the use of arsenic compounds as anticancer agents in clinical trials and in in vitro investigations is reviewed, including the experience at our institute. Treatment of newly diagnosed and relapsed patients with acute promyelocytic leukemia (APL) with arsenic trioxide (As2O3) has been found to result in complete remission (CR) rates of 85-93% when given by intravenous infusion for 2-3 h at a dose of 10 mg/day diluted in 5% glucose saline solution. Patients exhibit a response in 28-42 days. CR rates after administration of Composite Indigo Naturalis tablets containing arsenic sulfide and of pure tetraarsenic tetrasulfide reached 98% and 84.9%, respectively. At higher concentrations (1-2 microM), **arsenic** induced apoptosis, while at lower concentrations (0.1-0.5 microM), it triggered cell differentiation in vitro. As2O3-induced apoptosis has been observed in many cancer cell lines, including esophageal carcinoma, gastric cancer, **neuroblastoma**, lymphoid malignancies, and multiple myeloma. Its effectiveness was confirmed in the treatment of multiple myeloma. **Arsenic** compounds are effective agents in the treatment of APL and their activity against other types of cancer requires further investigation.
AB . . . Naturalis tablets containing arsenic sulfide and of pure tetraarsenic tetrasulfide reached 98% and 84.9%, respectively. At higher concentrations (1-2 microM), **arsenic** induced apoptosis, while at lower concentrations (0.1-0.5 microM), it triggered cell differentiation in vitro. As2O3-induced apoptosis has been observed in many cancer cell lines, including esophageal carcinoma, gastric cancer, **neuroblastoma**, lymphoid malignancies, and multiple myeloma. Its effectiveness was confirmed in the treatment of multiple myeloma.

Arsenic compounds are effective agents in the treatment of APL and their activity against other types of cancer requires further investigation.

L6 ANSWER 9 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 4
AN 2000:704139 CAPLUS
DN 134:8903
TI Longitudinal investigation of exposure to arsenic, cadmium, and lead in drinking water
AU Ryan, P. Barry; Huet, Natalie; MacIntosh, David L.
CS Department of Environmental and Occupational Health, Rollins School of Public Health, Emory University, Atlanta, GA, 30322, USA
SO Environmental Health Perspectives (2000), 108(8), 731-735
CODEN: EVHPAZ; ISSN: 0091-6765
PB National Institute of Environmental Health Sciences
DT Journal
LA English
AB **Arsenic**, Cd, and Pb have been assocd. with various forms of **cancer**, nephrotoxicity, **central nervous system** effects, and cardiovascular disease in humans. Drinking water is a well-recognized pathway of exposure to these metals. To improve understanding of the temporal dimension of exposure to As, Cd, and Pb in drinking water, we obtained 381 samples of tap and(or) tap/filtered water and self-reported rates of drinking water consumption from 73 members of a stratified random sample in Maryland. Data were collected at approx. 2-mo intervals from Sept., 1995, through Sept., 1996. Concns. of As (range <0.2 to 13.8 .mu.g/L) and Pb (<0.1 to 13.4 .mu.g/L) were within the ranges reported for the USA, as were the rates of drinking water consumption (median <0.1 to 4.1 L/day). Cd was present at a detectable level in only 8.1% of the water samples. Mean log-transformed concns. and exposures for As and Pb varied significantly among sampling cycles and among respondents, as did rates of drinking water consumption, according to a generalized linear model that accounted for potential correlation among repeated measures from the same respondent. We used the intraclass correlation coeff. of reliability to attribute the total variance obsd. for each exposure metric to between-person and within-person variability. Between-person variability was estd. to account for 67, 81, and 55% of the total variance in drinking water consumption, As exposure (.mu.g/day), and Pb exposure (.mu.g/day), resp. We discuss these results with respect to their implications for future exposure assessment research, quant. risk assessment, and environmental epidemiol.
RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
AB **Arsenic**, Cd, and Pb have been assocd. with various forms of **cancer**, nephrotoxicity, **central nervous system** effects, and cardiovascular disease in humans. Drinking water is a well-recognized pathway of exposure to these metals. To improve understanding of the temporal dimension of exposure to As, Cd, and Pb in drinking water, we obtained 381 samples of tap and(or) tap/filtered water and self-reported rates of drinking water consumption from 73 members of a stratified random sample in Maryland. Data were collected at approx. 2-mo intervals from Sept., 1995, through Sept., 1996. Concns. of As (range <0.2 to 13.8 .mu.g/L) and Pb (<0.1 to 13.4 .mu.g/L) were within the ranges reported for the USA, as were the rates of drinking water consumption (median <0.1 to 4.1 L/day). Cd was present at a detectable level in only 8.1% of the water samples. Mean log-transformed concns. and exposures for As and Pb varied significantly among sampling cycles and among respondents, as did rates of drinking water consumption, according to a generalized linear model that accounted for potential correlation among repeated measures from the same respondent. We used the intraclass correlation coeff. of reliability to attribute the total variance obsd. for each exposure metric to between-person and within-person variability. Between-person variability was estd. to account for 67, 81, and 55% of the total variance in drinking water consumption, As exposure (.mu.g/day), and

Pb exposure (.mu.g/day), resp. We discuss these results with respect to their implications for future exposure assessment research, quant. risk assessment, and environmental epidemiol.

L6 ANSWER 10 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 5
AN 2000299112 EMBASE
TI Lead and cancer in humans: Where are we now?.
AU Steenland K.; Boffetta P.
CS Dr. K. Steenland, Natl. Inst. for Occup. Safety/Hlth., 4676 Columbia Parkway, Cincinnati, OH 45226, United States. kns1@cdc.gov
SO American Journal of Industrial Medicine, (2000) 38/3 (295-299).
Refs: 26
ISSN: 0271-3586 CODEN: AJIMD8
CY United States
DT Journal; Conference Article
FS 016 Cancer
017 Public Health, Social Medicine and Epidemiology
035 Occupational Health and Industrial Medicine
046 Environmental Health and Pollution Control
052 Toxicology
LA English
SL English
AB Background: Lead is only weakly mutagenic, but in vitro it inhibits DNA repair and acts synergistically with other mutagens. Lead acetate administered orally, cutaneously, or intraperitoneally causes kidney cancer, brain cancer (gliomas), and lung cancer in rodents, and acts synergistically with other carcinogens. Most cytogenetic studies of exposed workers have shown increases in chromosome aberrations or sister chromatid exchange, including some studies with positive-exposure response trends. There are eight studies of cancer mortality or incidence among highly exposed workers; most are cohort studies of lead smelter or battery workers exposed decades ago. Methods: We reviewed the epidemologic studies with regard to cancer. Results: These studies provide some evidence of increased risk of lung cancer (RR = 1.30, 1.15-1.46, 675 observed deaths) and stomach cancer (combined RR = 1.34, 1.14-1.57, 181 observed). However, the lung cancer findings are not consistent across studies, and confounding by **arsenic** may affect the study with the highest lung cancer RR. Exclusion of that study yields a combined lung cancer RR of 1.14 (1.04-1.73). There is little evidence of increased risk of kidney cancer (combined RR = 1.01, 0.72-1.42, 40 observed) or **brain cancer** (combined RR = 1.06, 0.81-1.40, 69 observed). However, two studies show a two-fold increase in kidney cancer, and one study shows a significant excess of gliomas. IARC classified lead as a 'possible human carcinogen' based on sufficient animal data and insufficient human data in 1987. Six of the eight studies cited above have been published since 1987. Conclusion: Overall, there is only weak evidence associating lead with cancer; the most likely candidates are lung cancer, stomach cancer, and gliomas.
AB . . . (combined RR = 1.34, 1.14-1.57, 181 observed). However, the lung cancer findings are not consistent across studies, and confounding by **arsenic** may affect the study with the highest lung cancer RR. Exclusion of that study yields a combined lung cancer RR. . . 1.14 (1.04-1.73). There is little evidence of increased risk of kidney cancer (combined RR = 1.01, 0.72-1.42, 40 observed) or **brain cancer** (combined RR = 1.06, 0.81-1.40, 69 observed). However, two studies show a two-fold increase in kidney cancer, and one study. . .

L6 ANSWER 11 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 6
AN 2000:717989 CAPLUS
DN 134:51106
TI **Arsenic** Trioxide Inhibits **Neuroblastoma** Growth in Vivo and Promotes Apoptotic Cell Death in Vitro
AU Ora, Ingrid; Bondesson, Lennart; Jonsson, Carolin; Ljungberg, June;

Porn-Ares, Isabella; Garwicz, Stanislaw; Paahlman, Sven

CS Department of Laboratory Medicine, Division of Molecular Medicine, University Hospital MAS, Malmo, Swed.

SO Biochemical and Biophysical Research Communications (2000), 277(1), 179-185
CODEN: BBRCA9; ISSN: 0006-291X
PB Academic Press
DT Journal
LA English

AB Recent clin. studies have shown that inorg. arsenic trioxide (As2O3) at low concns. induces complete remission with minimal toxicity in patients with refractory acute promyelocytic leukemia (APL). Preclin. studies suggest that As2O3 induces apoptosis and possibly differentiation in APL cells. Like APL cells, neuroblastoma (NB) cells are thought to be arrested at an early stage of differentiation, and cells of highly malignant tumors fail to undergo spontaneous maturation. Both APL and NB cells can respond with differentiation to retinoic acid (RA) treatment in vitro and probably also in vivo. For that reason we investigated the effect of As2O3 alone and in combination with RA on NB cell lines. In vitro, the no. of viable NB cells was reduced at As2O3 concns. around 1 .mu.M after 72 h exposure. The IC50 in six different cell lines treated for 3 days was in the 1.5 to 5 .mu.M concn. interval, the most sensitive being SK-N-BE(2) cells derived from a chemotherapy resistant tumor. The combined treatment with RA (1 and 3 .mu.M) showed no consistent addnl. effect with regard to induced cell death. The effect of As2O3 on NB cell no. involved As2O3-induced apoptotic pathways (decreased expression of Bcl-2 and stimulation of caspase-3 activity) with no clear evidence of induced differentiation. The in vivo effect of As2O3 on NB growth was also investigated in nude mice bearing tumors of xenografted NB cells. Although tumor growth was reduced by As2O3 treatment, complete remission was not achieved at the concns. tested. We suggest that As2O3, in combination with existing treatment modalities, might be a treatment approach for high risk NB patients. (c) 2000 Academic Press.

RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI **Arsenic** Trioxide Inhibits **Neuroblastoma** Growth in Vivo and Promotes Apoptotic Cell Death in Vitro

ST **arsenic** trioxide **neuroblastoma** apoptosis retinoate

IT Apoptosis
Drug interactions
(**arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

IT Proteins, specific or class
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(bcl-2; **arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

IT Nerve, neoplasm
(**neuroblastoma**, inhibitors; **arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

IT Antitumor agents
(**neuroblastoma**; **arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

IT 302-79-4, Retinoic acid 1327-53-3, **Arsenic** Trioxide
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

IT 169592-56-7, Caspase-3
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(**arsenic** trioxide inhibits **neuroblastoma** growth in vivo and promotes apoptotic cell death in vitro)

L6 ANSWER 12 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 7
AN 2000266788 EMBASE
TI Developing new methods for the treatment of malignant brain tumours: Local delivery of anti-neoplastic agents using biodegradable polymers.
AU Olivi A.; DiMeco F.; Bohan E.; Brem H.
CS A. Olivi, Department of Neurological Surgery, John Hopkins Univ. Sch. of Medicine, Hunterian 817, 725 N. Wolfe Street, Baltimore, MD 21205, United States
SO FORUM - Trends in Experimental and Clinical Medicine, (2000) 10/2 (152-163).
Refs: 69
ISSN: 1121-8142 CODEN: FTCME2
CY Italy
DT Journal; General Review
FS 008 Neurology and Neurosurgery
016 Cancer
027 Biophysics, Bioengineering and Medical Instrumentation
037 Drug Literature Index
039 Pharmacy
LA English
SL English
AB Controlled delivery of chemotherapeutic agents by biodegradable polymers is a new strategy that has been added to the **arsenal** available for the treatment of malignant neoplasms. This approach is particularly suitable for the management of **brain tumours** because of the constraints imposed by the blood brain barrier (BBB). The use of polymers for local drug delivery minimises systemic toxicity, while achieving prolonged elevation of intratumoural drug concentrations that results in improved efficacy. In addition, this strategy broadens the spectrum of drugs available for the treatment of neoplasms in the central nervous system to include agents whose efficacy is significantly limited by systemic toxicity or inability to penetrate the BBB. In this review, we discuss the rationale and background for the use of this novel approach. We also summarise the clinical trials and laboratory investigations leading to the development of local delivery of anti-neoplastic agents from biodegradable polymers for the treatment of malignant gliomas.
AB Controlled delivery of chemotherapeutic agents by biodegradable polymers is a new strategy that has been added to the **arsenal** available for the treatment of malignant neoplasms. This approach is particularly suitable for the management of **brain tumours** because of the constraints imposed by the blood brain barrier (BBB). The use of polymers for local drug delivery minimises. . .

L6 ANSWER 13 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 8
AN 2001:8846 CAPLUS
DN 135:55592
TI Arsenic-induced apoptosis in malignant cells in vitro
AU Akao, Yukihiro; Yamada, Hiroko; Nakagawa, Yoshihito
CS Gifu International Institute of Biotechnology, Gifu, 505-0116, Japan
SO Leukemia & Lymphoma (2000), 37(1/2), 53-63
CODEN: LELYEA; ISSN: 1042-8194
PB Harwood Academic Publishers
DT Journal
LA English
AB **Arsenic** trioxide-induced apoptosis was identified by morphol. change and nucleosomal DNA fragmentation in hematopoietic malignant cells and **neuroblastoma** cells. Arsenic trioxide directly induced apoptosis in the acute promyelocytic cell line NB4 cells at a low dose of 1 .mu.M, whereas all-trans-retinoic acid caused the cells to differentiate and finally induced apoptosis. In addn. to the involvement of caspase 3

in arsenic trioxide-induced apoptosis of NB4 cells, the activation of caspase 8 was also shown to be involved by Western blot anal. or by apoptosis inhibition assay using caspase 8 inhibitor Ac-IETD-CHO. The down-regulation of Bcl-2 protein was shown in arsenic trioxide-treated pre-apoptotic and early apoptotic mouse B-cell line LyH7 cells, which overexpress Bcl-2 protein, by the studies of Western blot and immunoelectron microscopy. **Arsenic** trioxide also induced apoptosis in the majority of **neuroblastomas**, cell lines. The **arsenic**-induced apoptosis in **neuroblastoma** cell lines was mediated by the activation of caspase 3 in all cases tested. In regard to the intracellular content of reduced glutathione in various **neuroblastoma** cell lines, the level in the cells sensitive to **arsenic** trioxide was under 40 nmol/mg protein, but the cells having more than 40 nmol/mg protein did not undergo apoptosis. N-acetylcysteine protected **neuroblastoma** cells from **arsenic**-induced apoptosis. Therefore, the intracellular glutathione content may be a good indicator of application of arsenic trioxide for various kinds of cancer cells. Our results raise the possibility that **arsenic** trioxide will be effective even against a solid tumor such as **neuroblastoma** and warrants clin. trials for patients with other kinds of tumors not only by systemic therapy but also using local therapy.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

AB **Arsenic** trioxide-induced apoptosis was identified by morphol. change and nucleosomal DNA fragmentation in hematopoietic malignant cells and **neuroblastoma** cells. Arsenic trioxide directly induced apoptosis in the acute promyelocytic cell line NB4 cells at a low dose of 1 .mu.M, whereas all-trans-retinoic acid caused the cells to differentiate and finally induced apoptosis. In addn. to the involvement of caspase 3 in arsenic trioxide-induced apoptosis of NB4 cells, the activation of caspase 8 was also shown to be involved by Western blot anal. or by apoptosis inhibition assay using caspase 8 inhibitor Ac-IETD-CHO. The down-regulation of Bcl-2 protein was shown in arsenic trioxide-treated pre-apoptotic and early apoptotic mouse B-cell line LyH7 cells, which overexpress Bcl-2 protein, by the studies of Western blot and immunoelectron microscopy. **Arsenic** trioxide also induced apoptosis in the majority of **neuroblastomas**, cell lines. The **arsenic**-induced apoptosis in **neuroblastoma** cell lines was mediated by the activation of caspase 3 in all cases tested. In regard to the intracellular content of reduced glutathione in various **neuroblastoma** cell lines, the level in the cells sensitive to **arsenic** trioxide was under 40 nmol/mg protein, but the cells having more than 40 nmol/mg protein did not undergo apoptosis. N-acetylcysteine protected **neuroblastoma** cells from **arsenic**-induced apoptosis. Therefore, the intracellular glutathione content may be a good indicator of application of arsenic trioxide for various kinds of cancer cells. Our results raise the possibility that **arsenic** trioxide will be effective even against a solid tumor such as **neuroblastoma** and warrants clin. trials for patients with other kinds of tumors not only by systemic therapy but also using local therapy.

IT Nerve, neoplasm
(**neuroblastoma**; **arsenic**-induced apoptosis in malignant cells in vitro)

L6 ANSWER 14 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:325787 CAPLUS
DN 130:320838
TI Process for producing arsenic trioxide formulations and methods for treating cancer using arsenic trioxide or melarsoprol
IN Warrell, Raymond P., Jr.; Pandolfi, Pier Paolo; Gabrilove, Janice L.
PA Memorial Sloan-Kettering Cancer Center, USA
SO PCT Int. Appl., 48 pp.

CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9924029	A1	19990520	WO 1998-US24024	19981110
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2309652	AA	19990520	CA 1998-2309652	19981110
AU 9913973	A1	19990531	AU 1999-13973	19981110
AU 747474	B2	20020516		
EP 1037625	A1	20000927	EP 1998-957803	19981110
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001522799	T2	20011120	JP 2000-520121	19981110
BR 9814857	A	20011226	BR 1998-14857	19981110
US 2002013371	A1	20020131	US 1998-189965	19981110
NZ 504585	A	20020628	NZ 1998-504585	19981110
NO 2000002409	A	20000627	NO 2000-2409	20000509
US 2003099719	A1	20030529	US 2002-259950	20020930
PRAI US 1997-64655P	P	19971110		
US 1998-189965	A1	19981110		
WO 1998-US24024	W	19981110		

Jerry's Case

AB Arsenic compds. are used to treat a variety of cancers, including leukemia, lymphoma, and solid tumors. The arsenic compds. may be used in combination with other therapeutic agents, e.g. a retinoid. The invention also provides a process for producing arsenic trioxide formulations.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Bone, neoplasm
Brain, neoplasm
Lung, neoplasm
Skin, neoplasm
Skin, neoplasm
Stomach, neoplasm
(inhibitors; **arsenic** trioxide formulations and methods for treating cancer using **arsenic** trioxide or melarsoprol)

L6 ANSWER 15 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:262135 CAPLUS
DN 130:276741
TI Compositions and methods for the treatment of primary and metastatic neoplastic diseases using arsenic compounds
IN Ellison, Ralph M.; Mermelstein, Fred H.
PA Polarx Biopharmaceuticals, Inc., USA
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

Same case

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9918798	A1	19990422	WO 1998-US21782	19981015
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT,				

UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

CA 2307208	AA	19990422	CA 1998-2307208	19981015	
AU 9910893	A1	19990503	AU 1999-10893	19981015	
AU 751932	B2	20020829			
EP 1022951	A1	20000802	EP 1998-953552	19981015	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI					
BR 9813085	A	20000822	BR 1998-13085	19981015	
NZ 503973	A	20010928	NZ 1998-503973	19981015	
JP 2001519366	T2	20011023	JP 2000-515442	19981015	Same case
US 2002183385	A1	20021205	US 1998-173531	19981015	
NO 2000001977	A	20000613	NO 2000-1977	20000414	
PRAI US 1997-62375P	P	19971015			
WO 1998-US21782	W	19981015			

AB Arsenic compds. are used to treat a variety of neoplastic diseases, including metastatic neoplastic diseases.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Neuroglia
(**glioblastoma**, inhibitors; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Antitumor agents
(**glioblastoma**; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Nerve, neoplasm
(**neuroblastoma**, inhibitors; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Antitumor agents
(**neuroblastoma**; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Neuroglia
(**oligodendroglioma**, inhibitors; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Antitumor agents
(**oligodendroglioma**; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Eye, neoplasm
Eye, neoplasm
(**retinoblastoma**, inhibitors; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

IT Antitumor agents
Antitumor agents
(**retinoblastoma**; **arsenic** compds. for treatment of primary and metastatic neoplastic diseases, and combinations with other agents)

L6 ANSWER 16 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 9
AN 1999:346600 CAPLUS
DN 131:125056
TI Altered expression of the MYCN oncogene modulates MRP gene expression and response to cytotoxic drugs in neuroblastoma cells
AU Haber, M.; Bordow, S. B.; Gilbert, J.; Madafiglio, J.; Kavallaris, M.; Marshall, G.; Mechetner, E. B.; Fruehaupf, J. P.; Tee, L.; Cohn, S. L.; Salwen, H.; Schmidt, M. L.; Norris, M. D.

CS Children's Cancer Research Institute, Sydney Children's Hospital, Sydney, Australia
SO Oncogene (1999), 18(17), 2777-2782
CODEN: ONCNES; ISSN: 0950-9232
PB Stockton Press
DT Journal
LA English
AB We have recently shown a close correlation between expression of the Multidrug Resistance-assocd. Protein (MRP) gene and the MYCN oncogene and provided evidence that high MRP expression is a powerful independent predictor of poor outcome in neuroblastoma (Norris et al., New Engl. J. Med., 334, 231-238, 1996). The effect of MYCN down-regulation on MRP expression and response to cytotoxic drugs was investigated in NBL-S neuroblastoma cells transfected with MYCN antisense RNA constructs. Concomitant with MYCN down-regulation, the level of MRP expression was decreased in the NBAS-4 and NBAS-5 antisense transfectants. These cells demonstrated significantly increased sensitivity to the high affinity MRP substrates vincristine, doxorubicin, sodium arsenate and potassium antimony tartrate, but not to the poor MRP substrates, taxol or cisplatin. Similarly, transfection of full-length MYCN cDNA into SH-EP neuroblastoma cells resulted in increased MRP expression and significantly increased resistance specifically to MRP substrates. The results provide evidence for the MYCN oncogene influencing cytotoxic drug response via regulation of MRP gene expression. Our data also provide a link between the malignant and chemoresistant phenotypes of this childhood malignancy.
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT 57-22-7, Vincristine 7631-89-2, Sodium **arsenate** 15663-27-1, Cisplatin 23214-92-8, Doxorubicin 28300-74-5, Potassium antimony tartrate 33069-62-4, Taxol
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(altered expression of the MYCN oncogene modulates MRP gene expression and response to cytotoxic drugs in **neuroblastoma** cells)

L6 ANSWER 17 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 10
AN 1999:510737 CAPLUS
DN 131:237627
TI **Arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through the activation of caspase 3 in vitro
AU Akao, Yukihiro; Nakagawa, Oshihito; Akiyama, Kiyotaka
CS Gifu International Institute of Biotechnology, Mitake-cho, Kani-gun, Gifu, 505-0116, Japan
SO FEBS Letters (1999), 455(1,2), 59-62
CODEN: FEBLAL; ISSN: 0014-5793
PB Elsevier Science B.V.
DT Journal
LA English
AB Arsenic trioxide (As203) induces clin. remission in acute promyelocytic leukemia, even in all-trans retinoic acid-refractory cases, with minimal toxicity at low (1-2 .mu.M) concn. We exposed various neuroblastoma cell lines to As2O3 at a concn. of 2 .mu.M: as a result, seven of 10 neuroblastoma cell lines underwent apoptosis characterized by morphol. changes and nucleosomal DNA fragmentation. As2O3-induced apoptosis in neuroblastoma cells was shown to occur through the activation of caspase 3, as judged from Western blot anal. and apoptosis inhibition assay. It seemed that the sensitivity of neuroblastoma cells to As2O3 was inversely proportional to their intracellular level of reduced glutathione. Taken together these results indicate that As2O3 would be a candidate as a therapeutic agent for treatment of neuroblastoma, which is a solid tumor, not only by systemic therapy but also by local therapy.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

TI **Arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through the activation of caspase 3 in vitro
ST **arsenic** trioxide apoptosis **neuroblastoma** caspase 3
IT Apoptosis
(**arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro)
IT Antitumor agents
(leukemia; **arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro)
IT Nerve, neoplasm
(**neuroblastoma**; **arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro)
IT 169592-56-7, Caspase 3
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro)
IT 1327-53-3, **Arsenic** trioxide
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro)
IT 70-18-8, Glutathione, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**arsenic** trioxide induces apoptosis in **neuroblastoma** cell lines through activation of caspase 3 in vitro in relation to glutathione)

L6 ANSWER 18 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 11
AN 1998065976 EMBASE
TI Human brain tumors and exposure to metal and non-metal elements: A case-control study.
AU Hadfield M.G.; Adera T.; Smith B.; Fortner-Burton C.A.; Gibb R.D.; Mumaw V.
CS Dr. M.G. Hadfield, Department of Pathology, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA 23298, United States
SO Journal of Environmental Pathology, Toxicology and Oncology, (1998) 17/1 (1-9).
Refs: 48
ISSN: 0731-8898 CODEN: JEPOEC
CY United States
DT Journal; Article
FS 005 General Pathology and Pathological Anatomy
052 Toxicology
LA English
SL English
AB Background: Primary **brain tumors** are among the most deadly of all cancers, with a 1-year survival rate of 52%. Certain elements, such as nickel, cadmium, chromium, **arsenic**, and beryllium, are established carcinogens in other organs. Silicon and titanium are suspected carcinogens and other elements are known to promote or inhibit the rate of tumor growth. Knowledge about the carcinogenicity of these elements in the brain is limited. In this study, we investigated the potential role of these elements as risk factors for human brain tumors. Methods: In a case-control study, we assessed brain biopsies from 12 patients with various types of primary brain tumors and in tumor-free brain tissue from 6 autopsy cases. We used energy- dispersive X-ray analysis (EDX) to determine if there were significant differences in the concentration of the study elements in tumors and in control brains. Results: In a bivariate analysis, a statistically significant association was observed between the presence of brain tumors and the concentrations of silicon ($p = 0.01$), magnesium ($p = 0.01$), and calcium ($p = 0.03$). Zinc

was also associated with a borderline significance (p = 0.05). No association was observed for nickel (p = 0.74). Although the magnitude of the observed association was estimated using multiple logistic regression analyses, the relative risk estimates were imprecise because of insufficient sample size. Further research using a larger sample size is needed to elucidate the role of these elements in human brain carcinogenesis.

AB Background: Primary **brain tumors** are among the most deadly of all cancers, with a 1-year survival rate of 52%. Certain elements, such as nickel, cadmium, chromium, **arsenic**, and beryllium, are established carcinogens in other organs. Silicon and titanium are suspected carcinogens and other elements are known to. . .

L6 ANSWER 19 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 12
AN 97322838 EMBASE
DN 1997322838
TI The epidemiology of soft tissue sarcoma.
AU Zahm S.H.; Fraumeni J.F. Jr.
CS S.H. Zahm, National Cancer Institute, Executive Plaza North, 6130 Executive Blvd, Rockville, MD 20892-7364, United States
SO Seminars in Oncology, (1997) 24/5 (504-514).
Refs: 153
ISSN: 0093-7754 CODEN: SOLGAV
CY United States
DT Journal; General Review
FS 016 Cancer
017 Public Health, Social Medicine and Epidemiology
035 Occupational Health and Industrial Medicine
046 Environmental Health and Pollution Control
052 Toxicology
LA English
SL English
AB Soft tissue sarcoma (STS) accounts for approximately 1% of all cancers diagnosed annually in the United States. Population-based data from Connecticut covering the years 1935-1989 have shown an increasing incidence of STS in both genders, with a greater increase among men than women. The recent increase in acquired immune deficiency syndrome-related Kaposi's sarcoma does not explain the upward trend in STS, dating back decades. Etiologic heterogeneity is suggested by epidemiologic variations that have been observed by subsite and cell type. Among the environmental factors associated with STS are external radiation therapy, Thorotrast, **arsenical** pesticides and medications, phenoxyherbicides, dioxin, vinyl chloride, immunosuppressive drugs, alkylating agents, androgen-anabolic steroids, human immunodeficiency virus, and human herpes virus type 8. In addition, STS occurs excessively among persons with certain heritable states including **retinoblastoma**, Li-Fraumeni syndrome, Gardner's syndrome, Werner's syndrome, nevoid basal cell carcinoma syndrome, neurofibromatosis type I, and some immunodeficiency syndromes. These risk factors account for a minority of STS cases but provide leads for further epidemiologic and interdisciplinary studies into the genetic and environmental determinants of various forms of STS.
AB . . . have been observed by subsite and cell type. Among the environmental factors associated with STS are external radiation therapy, Thorotrast, **arsenical** pesticides and medications, phenoxyherbicides, dioxin, vinyl chloride, immunosuppressive drugs, alkylating agents, androgen-anabolic steroids, human immunodeficiency virus, and human herpes virus type 8. In addition, STS occurs excessively among persons with certain heritable states including **retinoblastoma**, Li-Fraumeni syndrome, Gardner's syndrome, Werner's syndrome, nevoid basal cell carcinoma syndrome, neurofibromatosis type I, and some immunodeficiency syndromes. These risk. . .

L6 ANSWER 20 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN

DUPLICATE 13
AN 96072631 EMBASE
DN 1996072631
TI Light-emitting diodes as a light source for intraoperative photodynamic therapy.
AU Schmidt M.H.; Bajic D.M.; Reichert II K.W.; Martin T.S.; Meyer G.A.; Whelan H.T.; Hill J.S.; Kaye A.H.; Muller P.J.; Origitano T.C.
CS Pediatric Neurology, Medical College of Wisconsin, 8701 Watertown Plank Road,Milwaukee, WI 53226, United States
SO Neurosurgery, (1996) 38/3 (552-557).
ISSN: 0148-396X CODEN: NRSRDY
CY United States
DT Journal; Article
FS 008 Neurology and Neurosurgery
027 Biophysics, Bioengineering and Medical Instrumentation
LA English
SL English
AB THE DEVELOPMENT OF more cost-effective light sources for photodynamic therapy of brain tumors would be of benefit for both research and clinical applications. In this study, the use of light-emitting diode arrays for photodynamic therapy of **brain tumors** with Photofrin porfimer sodium was investigated. An inflatable balloon device with a light-emitting diode (LED) tip was constructed. These LEDs are based on the new semiconductor aluminum gallium **arsenide**. They can emit broad-spectrum red light at high power levels with a peak wavelength of 677 nm and a bandwidth of 25 nm. The balloon was inflated with 0.1% intralipid, which served as a light-scattering medium. Measurements of light flux at several points showed a high degree of light dispersion. The spectral emission of this probe was then compared with the absorption spectrum of Photofrin. This analysis showed that the light absorbed by Photofrin with the use of the LED source was 27.5% of that absorbed with the use of the monochromatic 630-nm light. Thus, to achieve an energy light dose equivalent to that of a laser light source, the LED light output must be increased by a factor of 3.63. This need for additional energy is the difference between a 630- and 677-nm absorption of Photofrin. Using the LED probe and the laser balloon adapter, a comparison of brain stem toxicity in canines was conducted. LED and laser light showed the same signs of toxicity at equivalent light energy and Photofrin doses. The maximal tolerated dose of Photofrin was 1.6 mg/kg, using 100 J/cm2 of light energy administered by laser or LED. This study concludes that LEDs are a suitable light source for photodynamic therapy of brain tumors with Photofrin. In addition, LEDs have the potential to be highly efficient light sources for second-generation photosensitizers with absorption wavelengths closer to the LED peak emission.
AB . . . benefit for both research and clinical applications. In this study, the use of light-emitting diode arrays for photodynamic therapy of **brain tumors** with Photofrin porfimer sodium was investigated. An inflatable balloon device with a light-emitting diode (LED) tip was constructed. These LEDs are based on the new semiconductor aluminum gallium **arsenide**. They can emit broad-spectrum red light at high power levels with a peak wavelength of 677 nm and a bandwidth. . .

L6 ANSWER 21 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1996:500446 CAPLUS
DN 125:135258
TI Concentration of rare earth elements, As, and Th in human brain and brain tumors, determined by neutron activation analysis
AU Zhuang, Guisun; Zhou, Yunlu; Lu, Huijuan; Lu, Weidong; Zhou, Manfang; Wang, Yinsong; Tan, Mingguang
CS Shanghai Inst. Nucl. Res., Acad. Sin., Shanghai, 201800, Peop. Rep. China
SO Biological Trace Element Research (1996), 53(1-3), 45-49
CODEN: BTERDG; ISSN: 0163-4984
PB Humana

DT Journal
LA English
AB Toxic elements As and Th, six rare-earth elemental profiles of brain tumor tissues from 16 patients of astrocytomas (grade I-III), and normal human brain tissues of 18 male, age-matched autopsies serving as controls have been studied by radiochem. neutron activation anal. P-204 [di(2-ethylhexyl) phosphate] extn. chromatog. column was used for group sepn. of rare-earth element (REE) by one step. Compared with the normal brain tissues, the anal. results showed that the concns. of Th, La, Ce, Gd, and Lu were significantly higher in tumor tissues (or 0.001). The possible effects of REE on tumor cell were discussed.
IT 7439-91-0, Lanthanum, biological studies 7439-94-3, Lutetium, biological studies 7440-19-9, Samarium, biological studies 7440-29-1, Thorium, biological studies 7440-38-2, **Arsenic**, biological studies 7440-45-1, Cerium, biological studies 7440-54-2, Gadolinium, biological studies 7440-64-4, Ytterbium, biological studies
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BIOL (Biological study); OCCU (Occurrence)
(rare earth elements, As, and Th in human **brain** and **brain tumors**)

L6 ANSWER 22 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 14
AN 95108493 EMBASE
DN 1995108493
TI Scrapie prions selectively modify the stress response in neuroblastoma cells.
AU Tatzelt J.; Zuo J.; Voellmy R.; Scott M.; Hartl U.; Prusiner S.B.; Welch W.J.
CS Department of Neurology, University of California,San Francisco, CA 94143-0518, United States
SO Proceedings of the National Academy of Sciences of the United States of America, (1995) 92/7 (2944-2948).
ISSN: 0027-8424 CODEN: PNASA6
CY United States
DT Journal; Article
FS 004 Microbiology
005 General Pathology and Pathological Anatomy
029 Clinical Biochemistry
LA English
SL English
AB The fundamental event underlying scrapie infection seems to be a conformational change in the prion protein. To investigate proteins that might feature in the conversion of the cellular priori protein (PrP(C)) into the scrapie isoform (PrP(Sc)), we examined mouse **neuroblastoma** N2a cells for the expression and cellular distribution of heat shock proteins (Hsps), some of which function as molecular chaperones. In scrapie-infected N2a (ScN2a) cells, Hsp72 and Hsp28 were not induced by heat shock, sodium **arsenite**, or an amino acid analog, in contrast to uninfected control N2a cells, while other inducible Hsps were increased by these treatments. Following heat shock of the N2a cells, constitutively expressed Hsp73 was translocated from the cytoplasm into the nucleus and nucleolus. In contrast, the distribution of Hsp73 in ScN2a cells was not altered by heat shock; the discrete cytoplasmic structures containing Hsp73 were largely resistant to detergent extraction. These alterations in the expression and subcellular translocation of specific Hsps in ScN2a cells may reflect the cellular response to the accumulation of PrP(Sc). Whether any of these Hsps feature in the conversion of PrP(C) into PrP(Sc) or the pathogenesis of prion diseases remains to be established.
AB . . . that might feature in the conversion of the cellular priori protein (PrP(C)) into the scrapie isoform (PrP(Sc)), we examined mouse **neuroblastoma** N2a cells for the expression and cellular distribution of heat shock proteins (Hsps), some of which function as

molecular chaperones. In scrapie-infected N2a (ScN2a) cells, Hsp72 and Hsp28 were not induced by heat shock, sodium **arsenite**, or an amino acid analog, in contrast to uninfected control N2a cells, while other inducible Hsps were increased by these. . .

L6 ANSWER 23 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 15
AN 1994:648304 CAPLUS
DN 121:248304
TI Comparative in vitro effects of sodium **arsenite** and sodium **arsenate** on **neuroblastoma** cells
AU Repetto, Guillermo; Sanz, Pilar; Repetto, Manuel
CS National Institute of Toxicology, P.O. Box 863, Sevilla, 41080, Spain
SO Toxicology (1994), 92(1-3), 143-53
CODEN: TXCYAC; ISSN: 0300-483X
PB Elsevier
DT Journal
LA English
AB The toxic effects of arsenic at different cellular levels were assessed using two inorg. chem. species: sodium arsenite and sodium arsenate, representing the trivalent and pentavalent states of arsenic, resp. Mouse neuroblastoma cell cultures (Neuro-2a) were exposed for 24 h, and cytotoxic effects evaluated were: cell proliferation by quantification of total protein content; cytoplasmic membrane integrity to cytosolic lactate dehydrogenase leakage; lysosomal hexosaminidase release; lactate dehydrogenase activity; mitochondrial succinate dehydrogenase activity; relative neutral red uptake by lysosomes; lysosomal hexosaminidase sphingolipid degrdn. activity; and acetylcholinesterase activity. As(III) was five times more toxic than As(V) to neuroblastoma cell proliferation, but the relative extent of other alterations differed. Special sensitivity was detected for lactate dehydrogenase inhibition. Hexosaminidase activity was also very susceptible, being inhibited at low concns. and stimulated at high concns. Less sensitive were the inhibition of cell proliferation, relative neutral red uptake, and acetylcholinesterase activity. As(III) was lysosomotropic, with secretion of hexosaminidase, but the release was decreased by As(V). Mitochondrial succinate dehydrogenase was inhibited by As(III) and stimulated by As(V). Minor sensitivity to cytoplasmic lactate dehydrogenase leakage for both compds. also shows that functional metabolic alterations produced by arsenic are more important than structural damage.
TI Comparative in vitro effects of sodium **arsenite** and sodium **arsenate** on **neuroblastoma** cells

L6 ANSWER 24 OF 58 WPIDS COPYRIGHT 2003 THOMSON DERWENT on STN
AN 1993-100708 [12] WPIDS
DNC C1993-044406
TI Prodn. of selenium-72 and arsenic-72 from rubidium salt by spallation - selenium provides convenient stock material for rapid decay arsenic isotope, for tumour specific positron emission tomography.
DC E36 K08
IN PHILLIPS, D R
PA (REGC) UNIV CALIFORNIA; (USAT) US DEPT ENERGY
CYC 18
PI WO 9304768 A1 19930318 (199312)* EN 27p
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL SE
W: CA JP
US 5204072 A 19930420 (199317) 7p
EP 604505 A1 19940706 (199426) EN
R: DE FR GB
US 5371372 A 19941206 (199503) 7p
US 5405589 A 19950411 (199520) 7p
CA 2116870 C 20021217 (200309) EN
ADT WO 9304768 A1 WO 1992-US7347 19920904; US 5204072 A US 1991-756022 19910906; EP 604505 A1 EP 1992-919525 19920904, WO 1992-US7347 19920904; US 5371372 A Div ex US 1991-756022 19910906, US 1993-9250 19930125; US

5405589 A Div ex US 1991-756022 19910906, US 1994-297459 19940829; CA 2116870 C CA 1992-2116870 19920904, WO 1992-US7347 19920904
FDT EP 604505 A1 Based on WO 9304768; US 5371372 A Div ex US 5204072; US 5405589 A Div ex US 5204072; CA 2116870 C Based on WO 9304768
PRAI US 1991-756022 19910906
AB WO 9304768 A UPAB: 19931122
Prodn. of selenium isotopes comprising: (a) exposing nibidium bromide to a proton beam of sufficient energy to cause spallation of the RbBr; (b) dissolving the mixt. in HCl; (c) adding hydrazine dehydrochloride; (d) heating to reduce the vol. by 30-70%; (e) adding water as necessary to dissolve non-Se solid material; (f) cooling the soln. to ppte. Se; and (g) sepg. the solid Se from the cooled soln,; is new.

(B) Sepn. of arsenic-72 from selenium-72, comprising: (a) dissolving a mixt. of Se-72 and As-72, formed by radiocative decay of Se-72, by contacting the hot mixt. of hydrogen peroxide and HCl to form a Se-72/As-72 soln.; (b) destroying residual H2O2; (c) adding hydrazine dihydrochoride and heating to a temp. between 60 deg. C and the b.pt. of 6M HCl for 10-35 mins..; (d) cooling the soln.; and (e) sepg. Se in solid form from the cooled soln. contg. As-72; is also new.

USE/ADVANTAGE - As-72 has potential for use as a PET agent, as it has a 26.5 half-life and emits a 2.5MeV position. As-contg. bone, **brain**, and **tumour** seeking substances already exist, and an organic **arsenite** has been shown to cross the blood-**brain** barrier, permitting imaging of cerebral **tumours** and trauma. Availability of the As-72 will permit synthesis of radiopharmaceuticals (e.g. phenothiazine tranquillisers) labelling of monoclonal antibodies for tumour-specific PET imaging and possible early detection of lung cancer by visualisation of small tumours.
Dwg.0/2
AB . . .
potential for use as a PET agent, as it has a 26.5 half-life and emits a 2.5MeV position. As-contg. bone, **brain**, and **tumour** seeking substances already exist, and an organic **arsenite** has been shown to cross the blood-**brain** barrier, permitting imaging of cerebral **tumours** and trauma. Availability of the As-72 will permit synthesis of radiopharmaceuticals (e.g. phenothiazine tranquillisers) labelling of monoclonal antibodies for tumour-specific. . .

L6 ANSWER 25 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 16
AN 93232043 EMBASE
DN 1993232043
TI Enhanced production of morbillivirus gene-specific RNAs following induction of the cellular stress response in stable persistent infection.
AU Oglesbee M.J.; Kenney H.; Kenney T.; Krakowka S.
CS Dept. of Veterinary Pathobiology, Ohio State University, 1925 Coffey Road,Columbus, OH 43210, United States
SO Virology, (1993) 192/2 (556-567).
ISSN: 0042-6822 CODEN: VIRLAX
CY United States
DT Journal; Article
FS 004 Microbiology
037 Drug Literature Index
LA English
SL English
AB Previous in vitro work demonstrated the incorporation of the major inducible 70k heat shock protein (i.e., 72k HSP) into the biologically active light nucleocapsid (L-NC) variant of canine distemper virus (CDV). Here, in vitro induction of the cellular stress response, characterized by elevated cytoplasmic and intranuclear 72k HSP, enhanced L-NC expression in mink lung cells supporting stable persistent infection by raccoon-origin CDV. Increases in L-NC were correlated to increased viral RNA production in cell-free transcriptional assays. The enhanced production of viral

transcripts with infected cells following stress response induction was confirmed by slot blot and Northern blot analysis of total cellular RNA and was reflected in increased total viral protein production. Post-shock increases in viral fusion (F) gene transcripts and F protein were associated with dramatic increases in viral cytopathic effect. Modest induction of cell-free infectious viral progeny was also documented. A similar effect of the cellular stress response upon viral protein expression, cytopathic effect, and cell-free infectious progeny release was demonstrated in murine **neuroblastoma** cells persistently infected with a canine CDV isolate. Alterations of the persistent viral phenotype were independent of the specific mechanism of stress-response induction (i.e., heat or sodium **arsenite**), supporting the role of the stress response and not a particular stressor in mediating these changes. These results document the ability of the cellular environment to alter persistent viral RNA metabolism, thereby altering the infection phenotype.

AB . . . of the cellular stress response upon viral protein expression, cytopathic effect, and cell-free infectious progeny release was demonstrated in murine **neuroblastoma** cells persistently infected with a canine CDV isolate. Alterations of the persistent viral phenotype were independent of the specific mechanism of stress-response induction (i.e., heat or sodium **arsenite**), supporting the role of the stress response and not a particular stressor in mediating these changes. These results document the. . .

L6 ANSWER 26 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 17
AN 1993:210770 CAPLUS
DN 118:210770
TI Enhanced phosphorylation of a 65 kDa protein is associated with rapid induction of stress proteins in 9L rat brain tumor cells
AU Lai, Yiu Kay; Shen, Chi Hsiu; Cheng, Ting Jen; Hou, Ming Ching; Lee, Wen Chuan
CS Inst. Life Sci., Natl. Tsing Hua Univ., Hsinchu, 30043, Taiwan
SO Journal of Cellular Biochemistry (1993), 51(3), 369-79
CODEN: JCEBD5; ISSN: 0730-2312
DT Journal
LA English
AB Induction of heat-shock proteins and glucose-regulated proteins in 9L rat **brain tumor** cells can be differentially elicited by sodium **arsenite**, cadmium chloride, zinc chloride, copper sulfate, sodium fluoride, and L-azetidine-2-carboxylic acid. The kinds of stress protein induced by the above chems. varied considerably, mainly detd. by the nature and the concn. of the chems., as well as the treatment protocols. In addn., at the concns. where stress proteins can be induced, the above chems. were able to suppress general protein synthesis and were cytotoxic. Enhanced phosphorylation of a protein with an apparent mol. wt. of 65 kDa was detected during the induction of stress proteins except in azetidine treatments during which uptake of phosphate by the cells was impaired after prolonged incubation. The phosphate moiety on the 65 kDa phosphoprotein appeared to be alk.-stable and two-dimensional gel electrophoresis revealed that the phosphoprotein resolved into four isoforms with isoelec. points ranging from 5.1 to 5.6. Enhanced phosphorylation of the same protein was also detected in heat-shocked and with angulatin A-treated 9L cells in which stress proteins were induced. It is suggested that this phosphoprotein may be a common target for heat stress response-stimulated phosphorylation and important in the further metabolic responses of the cell to stress.

AB Induction of heat-shock proteins and glucose-regulated proteins in 9L rat **brain tumor** cells can be differentially elicited by sodium **arsenite**, cadmium chloride, zinc chloride, copper sulfate, sodium fluoride, and L-azetidine-2-carboxylic acid. The kinds of stress protein induced by the above chems. varied considerably, mainly detd. by the nature and the concn. of the chems., as well as the treatment protocols. In addn., at the concns. where stress proteins can be induced,

the above chems. were able to suppress general protein synthesis and were cytotoxic. Enhanced phosphorylation of a protein with an apparent mol. wt. of 65 kDa was detected during the induction of stress proteins except in azetidine treatments during which uptake of phosphate by the cells was impaired after prolonged incubation. The phosphate moiety on the 65 kDa phosphoprotein appeared to be alk.-stable and two-dimensional gel electrophoresis revealed that the phosphoprotein resolved into four isoforms with isoelec. points ranging from 5.1 to 5.6. Enhanced phosphorylation of the same protein was also detected in heat-shocked and with angulatin A-treated 9L cells in which stress proteins were induced. It is suggested that this phosphoprotein may be a common target for heat stress response-stimulated phosphorylation and important in the further metabolic responses of the cell to stress.

L6 ANSWER 27 OF 58 MEDLINE on STN
AN 93237011 MEDLINE
DN 93237011 PubMed ID: 7682827
TI Essential trace elements in humans. Serum arsenic concentrations in hemodialysis patients in comparison to healthy controls.
AU Mayer D R; Kosmus W; Pogglitsch H; Mayer D; Beyer W
CS Institute for Analytical Chemistry, Karl Franzens University Graz, Austria.
SO BIOLOGICAL TRACE ELEMENT RESEARCH, (1993 Apr) 37 (1) 27-38.
Journal code: 7911509. ISSN: 0163-4984.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199305
ED Entered STN: 19930611
Last Updated on STN: 19960129
Entered Medline: 19930527
AB Serum arsenic concentrations of persons suffering from renal failure and undergoing hemodialysis treatment (n = 85) and of healthy controls (n = 25) were determined by hydride-generation AAS technique after microwave digestion. The results were evaluated by comparing the values of both groups, considering physiological factors and individual data, as well as comorbid conditions of the hemodialysis (HD) patients. Serum arsenic levels were diminished in the patient group compared with controls (mean values 8.5 +/- 1.8 ng/mL vs 10.6 +/- 1.3 ng/mL). Furthermore, additional diseases within the hemodialysis group, particularly injuries of the **central nervous system** (**CNS**), vascular diseases, and **cancer**, were correlated to occasionally markedly decreased serum **arsenic** concentrations. It was concluded that arsenic homeostasis is disturbed by HD treatment and certain additional diseases. Desirable arsenic concentrations in the body seem to be reasonable. This consideration results in the conclusion that arsenic could play an essential role in human health. Thus, reference arsenic concentrations in different human tissues and body fluids should be established in order to recognize not only arsenic intoxication, but also arsenic deficiency. Perhaps arsenic deficiency contributes to the increased death risk of HD patients, and therefore, arsenic supplementations for patients with extremely low serum arsenic concentrations should be taken into account.
AB . . . 8.5 +/- 1.8 ng/mL vs 10.6 +/- 1.3 ng/mL). Furthermore, additional diseases within the hemodialysis group, particularly injuries of the **central nervous system** (**CNS**), vascular diseases, and **cancer**, were correlated to occasionally markedly decreased serum **arsenic** concentrations. It was concluded that arsenic homeostasis is disturbed by HD treatment and certain additional diseases. Desirable arsenic concentrations in. . .

L6 ANSWER 28 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:404122 CAPLUS

DN 119:4122
TI Radioarsenic labeled compounds: synthesis and biological evaluation for potential application in nuclear imaging and therapy
AU Emran, A. M.; Stubbs, J. B.; Shanbaky, N. M.; Phillips, D. R.
CS Health Sci. Cent., Univ. Texas, Houston, TX, USA
SO Int. Radiopharm. Dosim. Symp., 5th (1992), Meeting Date 1991, Issue CONF-910529; DE92 013066, 419-33. Editor(s): Watson, Evelyn E.; Schlafke-Stelson, Audrey T. Publisher: Oak Ridge Assoc. Univ., Oak Ridge, Tenn.
CODEN: 58WCAX
DT Conference
LA English
AB Synthesis and in vitro and in vivo studies have been carried out to evaluate the potential of organoarsenic compds. for application in cancer chemotherapy and further utilization in nuclear medicine when labeled with the appropriate radioisotope for tumor imaging or therapy. Dimethylarsino derivs. of sulfhydryl-contg. compds. have been synthesized and evaluated as carcinostatic agents. These compds. demonstrated moderate to weak activity. The successful use of simple radiolabeled inorg. and org. **arsenicals** for in vivo imaging of space occupying lesions in human **brains**, including various types of **malignancies**, has stimulated further development of such dimethylarsino-mercapto derivs. Previously, the authors had studied the kinetic behavior of two of these compds., in vivo, using their radiolabeled analogs. These studies have illustrated the biodistribution patterns of these compds. and may be useful in detg. their biol. half-times. From this data, radiation dose ests. have been calcd. for comparison of several radioisotopes of arsenic to evaluate their suitability for nuclear imaging or therapy.
AB Synthesis and in vitro and in vivo studies have been carried out to evaluate the potential of organoarsenic compds. for application in cancer chemotherapy and further utilization in nuclear medicine when labeled with the appropriate radioisotope for tumor imaging or therapy. Dimethylarsino derivs. of sulfhydryl-contg. compds. have been synthesized and evaluated as carcinostatic agents. These compds. demonstrated moderate to weak activity. The successful use of simple radiolabeled inorg. and org. **arsenicals** for in vivo imaging of space occupying lesions in human **brains**, including various types of **malignancies**, has stimulated further development of such dimethylarsino-mercapto derivs. Previously, the authors had studied the kinetic behavior of two of these compds., in vivo, using their radiolabeled analogs. These studies have illustrated the biodistribution patterns of these compds. and may be useful in detg. their biol. half-times. From this data, radiation dose ests. have been calcd. for comparison of several radioisotopes of arsenic to evaluate their suitability for nuclear imaging or therapy.

L6 ANSWER 29 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1992:147354 CAPLUS
DN 116:147354
TI Multielemental determination in normal, benign, and cancerous tissues of the human brain
AU Rajadhyaksha, M. M.; Turel, Z. R.
CS Nucl. Chem. Div., Inst. Sci., Bombay, 400 032, India
SO Journal of Radioanalytical and Nuclear Chemistry (1992), 156(2), 341-7
CODEN: JRNCDM; ISSN: 0236-5731
DT Journal
LA English
AB This paper discusses the detn. of some elements in diseased tissues of the human brain. As the elements present are mostly at micro- or nano-gram levels, the very sensitive technique of neutron activation anal. involving radiochem. sepn. has been employed. Substoichiometric estns. were carried out wherever possible. The radiochem. sepn. procedure includes a solvent extn. and pptn. technique. The elements estd. in the tissue samples are Cu, Au, As, Se, Hg, Co, Zn, Ca, Fe, P, Cr, Na, and K. The accuracy, precision, and radiochem. purity of the method have been discussed. Two

samples and a std. can be analyzed in four days.
IT 7439-89-6, Iron, analysis 7439-97-6, Mercury, analysis 7440-09-7, Potassium, analysis 7440-23-5, Sodium, analysis 7440-38-2, **Arsenic**, analysis 7440-47-3, Chromium, analysis 7440-48-4, Cobalt, analysis 7440-50-8, Copper, analysis 7440-57-5, Gold, analysis 7440-66-6, Zinc, analysis 7440-70-2, Calcium, analysis 7723-14-0, Phosphorus, analysis 7782-49-2, Selenium, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in normal, benign and **cancerous** tissues of human **brain** by neutron activation anal.)

L6 ANSWER 30 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 18
AN 92106856 EMBASE
DN 1992106856
TI Heme oxygenase: Expression in human retina and modulation by stress agents in a human retinoblastoma cell model system.
AU Kutty G.; Hayden B.; Osawa Y.; Wiggert B.; Chader G.J.; Kutty R.K.
CS Building 6, National Eye Institute, National Institutes of Health, Bethesda, MD 20892, United States
SO Current Eye Research, (1992) 11/2 (153-160).
ISSN: 0271-3683 CODEN: CEYRDM
CY United Kingdom
DT Journal; Article
FS 001 Anatomy, Anthropology, Embryology and Histology
002 Physiology
012 Ophthalmology
022 Human Genetics
029 Clinical Biochemistry
LA English
SL English
AB PCR and Southern blot analyses demonstrate that mRNA for heme oxygenase (HO), a well known 'stress protein' in a number of tissues, is present in human retina. Western and northern blots show that the protein and mRNA are also expressed in human Y-79 **retinoblastoma** cells in culture and that the HO enzyme is rapidly induced by its substrate, heme. Moreover, HO is also induced by two chemicals, sodium **arsenite** and menadione, that act as agents of oxidative stress. HO is the regulatory enzyme in the heme degradative pathway and an increase in its activity could lead to the accumulation of bilirubin, an antioxidant, in the cell at the expense of heme, a prooxidant. The HO pathway may thus be of importance in protecting the retina against oxidative stress in vivo. Moreover, the Y-79 culture system should provide an excellent model for use in examining stress mechanisms in retinal cells at a molecular level.
AB . . . present in human retina. Western and northern blots show that the protein and mRNA are also expressed in human Y-79 **retinoblastoma** cells in culture and that the HO enzyme is rapidly induced by its substrate, heme. Moreover, HO is also induced by two chemicals, sodium **arsenite** and menadione, that act as agents of oxidative stress. HO is the regulatory enzyme in the heme degradative pathway and. . .

L6 ANSWER 31 OF 58 CANCERLIT on STN
AN 91211646 CANCERLIT
DN 91211646 PubMed ID: 2089240
TI [Exposure to agricultural chemicals and oncogenic risk].
Esposizione a fitofarmaci e rischio oncogeno.
AU Vineis P; Settimi L; Seniori Costantini A
CS Servizio di Epidemiologia dei Tumori, Ospedale Maggiore, Universita di Torino.
SO MEDICINA DEL LAVORO, (1990 Sep-Oct) 81 (5) 363-72.
Journal code: 0401176. ISSN: 0025-7818.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
LA Italian

FS MEDLINE; Priority Journals
OS MEDLINE 91211646
EM 199105
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB The authors review the available evidence on cancer risk associated with exposure to agricultural chemicals. Agricultural workers generally show a lower cancer mortality compared with other occupational categories. This observation is currently believed to be due to lower cigarette consumption. However, for some types of tumours (lymphoma, leukaemia, myeloma, soft tissue sarcoma, skin, prostate, **brain** and stomach **tumours**), mortality is higher among agricultural workers. The only chemical substances used in agriculture for which the IARC Monographs have established the existence of sufficient evidence of carcinogenicity for man are **arsenical** compounds and mineral oils; for other substances there is clear evidence of carcinogenicity in experimental animals, mostly in the absence of human data. In the case of exposure to phenoxyacetic herbicides, the available epidemiological evidence is contradictory, with excesses of non-Hodgkin lymphoma and soft tissue sarcoma reported in some studies but not in others. Cohort studies have been performed among insecticide production workers and spray operators (with excesses of lung tumour), and among grain processing workers (with excesses of non-Hodgkin lymphoma in particular). A number of case-control studies are also available, especially concerning tumours of the lymphatic and haemopoietic systems and ovarian tumours.
AB . . . be due to lower cigarette consumption. However, for some types of tumours (lymphoma, leukaemia, myeloma, soft tissue sarcoma, skin, prostate, **brain** and stomach **tumours**), mortality is higher among agricultural workers. The only chemical substances used in agriculture for which the IARC Monographs have established the existence of sufficient evidence of carcinogenicity for man are **arsenical** compounds and mineral oils; for other substances there is clear evidence of carcinogenicity in experimental animals, mostly in the absence. . .

L6 ANSWER 32 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 19
AN 90078198 EMBASE
DN 1990078198
TI Malignant tumors in children of northeastern Zaire: a comparison of distribution patterns.
AU Fischer P.R.; Ahuka L.O.; Wood P.B.; Lucas S.
CS Department of Pediatrics, Evangelical Medical Center, Nyankunde, Zaire
SO Clinical Pediatrics, (1990) 29/2 (95-98).
ISSN: 0009-9228 CODEN: CPEDAM
CY United States
DT Journal; Article
FS 007 Pediatrics and Pediatric Surgery
016 Cancer
017 Public Health, Social Medicine and Epidemiology
025 Hematology
LA English
SL English
AB In an effort to better understand the epidemiology of cancer in Zaire, a retrospective review of biopsy-proven malignant tumors was undertaken. Of 188 biopsies taken from children aged 0-15 years over a 4.5 year period, 73 (39%) revealed malignancy. Fifty-six percent of patients with malignant tumors were boys. Lymphoma was the most common tumor (28 patients, 15 with Burkitt's lymphoma). Sarcoma (15 patients), carcinoma (8 patients), Wilms' tumor (6 patients), and retinoblastoma (5 patients) were also seen. Lymphomas were most heavily represented in the first 5 years of life, while sarcoma and carcinoma accounted for most of the malignancies in children after 10 years of age. Lymphomas and sarcomas are relatively more common in Zaire than in North America and Europe, while leukemia and **central nervous system tumors** are

notably less common in Zaire. In view of current limitations on health care in rural Zaire, cancer care should be directed toward early diagnosis, quick referral for appropriate surgical care, and use of the limited **arsenal** of chemotherapy.

AB . . . of age. Lymphomas and sarcomas are relatively more common in Zaire than in North America and Europe, while leukemia and **central nervous system tumors** are notably less common in Zaire. In view of current limitations on health care in rural Zaire, cancer care should be directed toward early diagnosis, quick referral for appropriate surgical care, and use of the limited **arsenal** of chemotherapy.

L6 ANSWER 33 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 20
AN 88052011 EMBASE
DN 1988052011
TI Lymphokine-activated killer cell lysis of human neuroblastoma cells: A model for purging tumor cells from bone marrow.
AU Ades E.W.; Peacocke N.; Sabio H.
CS Department of Pathology, Medical College of Georgia, Augusta, GA 30912-0300, United States
SO Clinical Immunology and Immunopathology, (1988) 46/1 (150-156).
ISSN: 0090-1229 CODEN: CLIIAT
CY United States
DT Journal
FS 005 General Pathology and Pathological Anatomy
007 Pediatrics and Pediatric Surgery
008 Neurology and Neurosurgery
016 Cancer
025 Hematology
026 Immunology, Serology and Transplantation
LA English
SL English
AB Evidence is presented that **neuroblastoma** tumor cells in host bone marrow is susceptible to autologous lymphokine-activated killer cells (LAK). Thus, immunologic purging of bone marrow with LAK may be considered as a tool in the **arsenal** of bone marrow purging for autologous bone marrow transplantation.
AB Evidence is presented that **neuroblastoma** tumor cells in host bone marrow is susceptible to autologous lymphokine-activated killer cells (LAK). Thus, immunologic purging of bone marrow with LAK may be considered as a tool in the **arsenal** of bone marrow purging for autologous bone marrow transplantation.

L6 ANSWER 34 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 21
AN 87112002 EMBASE
DN 1987112002
TI Stress-induced thermotolerance of the cytoskeleton of mouse neuroblastoma N2A cells and rat Reuber H35 hepatoma cells.
AU Wiegant F.A.C.; Van Bergen En Henegouwen P.M.P.; Van Dongen G.; Linnemans W.A.M.
CS Department of Molecular Cell Biology, University of Utrecht, 3584 CH Utrecht, Netherlands
SO Cancer Research, (1987) 47/6 (1674-1680).
CODEN: CNREA8
CY United States
DT Journal
FS 016 Cancer
005 General Pathology and Pathological Anatomy
LA English
AB A conditioning treatment of 30 min at 42.degree.C or 43.degree.C, followed by a 4-h recovery period at 37.degree.C, induces thermotolerance state in the cytoskeleton of Reuber H35 hepatoma cells and N2A neuroblastoma cells.

Evidence for the involvement of heat shock proteins in the development of thermotolerance in the cytoskeleton has been obtained from the following observations: (a) only those conditioning treatments inducing the enhanced synthesis of heat shock proteins (HSPs) are able to induce the heat-resistant state of the cytoskeleton; (b) prevention of HSP synthesis by actinomycin D or cycloheximide also prevents the acquisition of thermotolerance in the cytoskeleton; (c) an alternative inducer of HSP synthesis, sodium **arsenite**, is also able to induce the cytoskeletal thermotolerance; (d) the kinetics of development and disappearance of thermotolerance in the cytoskeleton is parallel to the kinetics of accumulation and decay of HSPs. The possible function of HSPs in the heat-resistant cytoskeleton of H35 hepatoma and N2A **neuroblastoma** cells is discussed.

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L6 ANSWER 35 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 22
AN 1987:573348 CAPLUS
DN 107:173348
TI Heat shock gene expression and cytoskeletal alterations in mouse neuroblastoma cells
AU Van Bergen en Henegouwen, Paul M. P.; Linnemans, Wilbert A. M.
CS Dep. Mol. Cell Biol., State Univ. Utrecht, Utrecht, 3584 CH, Neth.
SO Experimental Cell Research (1987), 171(2), 367-75
CODEN: ECREAL; ISSN: 0014-4827
DT Journal
LA English
AB The cytoskeleton of **neuroblastoma** cells, clone Neuro 2A, is altered by 2 stress conditions: heat shock and **arsenite** treatment. Microtubules are reorganized, intermediate filaments are aggregated around the nucleus, and the no. of stress fibers is reduced. Since both stress modalities induce similar cytoskeletal alterations, no thermic denaturation of .gtoreq.1 cytoskeletal components can be involved in this process. Heat-shock proteins (hsps) are induced both by heat and by arsenite. However, cells treated with arsenite synthesize hsp28 which is not detected in heat-treated cells. Synthesize of all hsps is prevented by addn. of actinomycin D or cycloheximide. Under these conditions no alterations are obsd. in the organization of microtubules and intermediate filaments during heat or arsenite treatment. However, these drugs are not able to prevent the rapid loss of stress fibers. A reformation of the cytoskeleton during the recovery period proceeds within 3 h and is also found to occur in the presence of a protein synthesis inhibitor. Apparently, reorganization of microtubules and intermediate filaments during a stress treatment requires the synthesis of a new protein(s), probably hsp(s).

AB The cytoskeleton of **neuroblastoma** cells, clone Neuro 2A, is altered by 2 stress conditions: heat shock and **arsenite** treatment. Microtubules are reorganized, intermediate filaments are aggregated around the nucleus, and the no. of stress fibers is reduced. Since both stress modalities induce similar cytoskeletal alterations, no thermic denaturation of .gtoreq.1 cytoskeletal components can be involved in this process. Heat-shock proteins (hsps) are induced both by heat and by arsenite. However, cells treated with arsenite synthesize hsp28 which is not detected in heat-treated cells. Synthesize of all hsps is prevented by addn. of actinomycin D or cycloheximide. Under these conditions no alterations are obsd. in the organization of microtubules and intermediate filaments during heat or arsenite treatment. However, these drugs are not able to prevent the rapid loss of stress fibers. A

reformation of the cytoskeleton during the recovery period proceeds within 3 h and is also found to occur in the presence of a protein synthesis inhibitor. Apparently, reorganization of microtubules and intermediate filaments during a stress treatment requires the synthesis of a new protein(s), probably hsp(s).

L6 ANSWER 36 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 23
AN 1987:100240 CAPLUS
DN 106:100240
TI Concentrations of zinc, iron, molybdenum, **arsenic**, and lithium in cerebrospinal fluid of patients with **brain tumors**
AU El-Yazigi, Adnan; Al-Saleh, Iman; Al-Mefty, Ossama
CS Res. Cent., King Faisal Spec. Hosp., Riyadh, 11211, Saudi Arabia
SO Clinical Chemistry (Washington, DC, United States) (1986), 32(12), 2187-90
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
AB Flameless at. absorption spectrophotometry was used to measure concns. of Fe, Mo, Li, As, and Zn in cerebrospinal fluid (CSF) of patients with malignant brain tumors, benign brain tumors, nonbrain malignant tumors, and control (non-neoplastic disease) patients. Mean concns. (.mu.g/L) of these elements in the control group were 62.7 for Fe, 6.8 for Mo, 0.7 for Li, 1.3 for As, and 7 for Zn. Li was detected in <53% of controls. Zn concns. in CSF of patients with astrocytoma (malignant brain tumor), benign brain tumors, or nonbrain tumors were less then in control patients; the ratios for tumor patients/control patients for the above groups were 0.3, 0.20, and 0.17, resp. Concns. of As in CSF of patients with nonbrain malignant tumors were higher than in the controls; the ratio for nonbrain tumor patients/control patients was 2.9. Differences in the concns. of Fe, Li, or Mo among the various groups were nonsignificant.
TI Concentrations of zinc, iron, molybdenum, **arsenic**, and lithium in cerebrospinal fluid of patients with **brain tumors**

L6 ANSWER 37 OF 58 MEDLINE on STN DUPLICATE 24
AN 86280664 MEDLINE
DN 86280664 PubMed ID: 3734868
TI Measurements of calcium transients in the soma, neurite, and growth cone of single cultured neurons.
AU Bolsover S R; Spector I
NC NS 20857 (NINDS)
NS 22028 (NINDS)
SO JOURNAL OF NEUROSCIENCE, (1986 Jul) 6 (7) 1934-40.
Journal code: 8102140. ISSN: 0270-6474.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198609
ED Entered STN: 19900321
Last Updated on STN: 19970203
Entered Medline: 19860917
AB Voltage-gated changes in cytosolic free calcium ion concentration were measured in single, differentiated cells of mouse **neuroblastoma** clone N1E-115 using the calcium-sensitive dye **arsenazo** III (AIII). In cells bathed in normal medium containing 10 mM calcium, the changes in AIII absorbance during a single action potential indicated an increase of 1.4 nM in cytosolic calcium. When 10 mM tetraethylammonium (TEA) was added to the bath, the action potential became prolonged and the change in cytosolic calcium increased to 3.9 nM. Under these conditions, repetitive stimulation at 0.5 Hz or faster caused a gradual decline in the amplitude and duration of the action potential and a gradual decline of the change in cytosolic calcium associated with each action potential. The amplitude of the prolonged after-hyperpolarization (AHP) that follows the action potential was found to reflect the magnitude of the change in

cytosolic calcium. An action potential elicited in the cell soma caused an increase in cytosolic calcium in the soma, neurite, and growth cone regions of a single cell, indicating that the membrane of all three regions possesses voltage-gated calcium channels. Estimation of calcium flux per unit area of membrane suggests a distinct topographical organization of calcium channels. Calcium channel densities in the growth cone and cell soma regions are similar and significantly higher than that in the neurite.

AB Voltage-gated changes in cytosolic free calcium ion concentration were measured in single, differentiated cells of mouse **neuroblastoma** clone N1E-115 using the calcium-sensitive dye **arsenazo** III (AIII). In cells bathed in normal medium containing 10 mM calcium, the changes in AIII absorbance during a single. . .

L6 ANSWER 38 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 25
AN 1986:512852 CAPLUS
DN 105:112852
TI Two components of voltage-dependent calcium influx in mouse **neuroblastoma** cells. Measurement with **arsenazo** III
AU Bolsover, Stephen R.
CS Dep. Physiol., Univ. Coll., London, WC1E 6BT, UK
SO Journal of General Physiology (1986), 88(2), 149-65
CODEN: JGPLAD; ISSN: 0022-1295
DT Journal
LA English
AB NIE-115 mouse **neuroblastoma** cells were injected with the Ca indicator dye **arsenazo** III. Optical absorbance changes during voltage-clamp depolarization were used to examine the properties of the 2 Ca currents present in these cells. The rapidly inactivating Ca current inactivates by a voltage-dependent intracellular Ca during depolarization to >-20 mV. Lowering the extracellular Ca concn. affects the 2 Ca currents unequally, with the slowly inactivating current being reduced the most. Intracellular Ca falls very slowly after a depolarization. The rapidly inactivating Ca current is responsible for a Ca action potential under physiol. conditions. In contrast, it is unlikely that the slowly inactivating Ca current has an important elec. role. Rather, its function may be to add a further increment of Ca influx over and above the Ca influx through the rapidly inactivating Ca channels.
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L6 ANSWER 39 OF 58 MEDLINE on STN DUPLICATE 26
AN 86091790 MEDLINE
DN 86091790 PubMed ID: 2417097
TI Aspects of immunobiology and immunotherapy and uses of monoclonal antibodies and biologic immune modifiers in human gliomas.
AU Lee Y; Bigner D D
NC 1PO1NS20023 (NINDS)
2PO1CA32672 (NCI)
5R01CA11898 (NCI)
SO NEUROLOGIC CLINICS, (1985 Nov) 3 (4) 901-17. Ref: 71

Journal code: 8219232. ISSN: 0733-8619.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
LA English
FS Priority Journals
EM 198602
ED Entered STN: 19900321
Last Updated on STN: 19970203
Entered Medline: 19860218
AB Recent progress in brain tumor biology research has helped us to understand the causes of our failure to improve patient survival with current therapeutic approaches. Present combination regimens of surgery, radiotherapy, and chemotherapy fail to address adequately two inherent biologic properties of brain tumors: tumor-induced host immunosuppression and tumor cell heterogeneity. Future success in immunotherapy will depend on our ability to dissect the mechanisms involved in tumor-host interactions. Also, therapies may have to be individualized. The potential for MAs in research and clinical application is great owing to their unlimited discriminative power for molecular and functional characterization. Differential diagnosis of difficult cases, such as parenchymatous tumors or neoplastic cells in CSF, with panels of MAs will be available in the near future. The use of MAs to direct localization and therapy of brain tumors is also promising, as evidenced by the preliminary data from our laboratory and from those of other workers. Other applications of MAs, such as prevention of invasion and metastasis by targeting cell surface molecules involved in cell-matrix attachment function, are also under study. Future refinement in MA-specificity and in enhancement of MA-delivery to tumor sites will significantly complement new therapeutic approaches. As brain tumors evade immunosurveillance through active participation in inducing tumor-specific immunosuppression, successful immunotherapy, either passive serotherapy or active immunization, will be best achieved in patients with a slight or moderate immunosuppressive state. Alteration of immune status with various biologic response modifiers to boost host reactivity against tumors will be an important adjunct in our **arsenal** against **brain tumors**. IFNs, with their direct tumoricidal activity, and lymphokines (such as interleukin-2) may be such reagents with a promising future.
AB . . . immune status with various biologic response modifiers to boost host reactivity against tumors will be an important adjunct in our **arsenal** against **brain tumors**. IFNs, with their direct tumoricidal activity, and lymphokines (such as interleukin-2) may be such reagents with a promising future.

L6 ANSWER 40 OF 58 CANCERLIT on STN
AN 86621021 CANCERLIT
DN 86621021
TI HYPERTHERMIA INDUCES DIFFERENT CYTOSKELETAL ALTERATIONS IN RAT HEPATOMA CELLS AND MURINE NEUROBLASTOMA.
AU van Bergen en Henegouwen P M; Jordi W J; van der Meer Y; van Dongen G; Linnemans W A
CS State Univ. of Utrecht, Dept. of Mol. Cell Biology, Padualaan 8, 3584 CH Utrecht, The Netherlands.
SO Non-serial, (1984) Hyperthermic Oncology 1984. Volume 1. Summary Papers. Proceedings of the 4th International Symposium. Overgaard J, ed. Philadelphia, Taylor and Francis, p. 87-90, 1984. .
DT (MEETING PAPER)
LA English
FS Institute for Cell and Developmental Biology
EM 198603
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB Hyperthermia of mammalian cells results in a repression of normal protein

synthesis activity concomitant with an accumulation of a small number of heat shock proteins, the stress proteins (SPs). This repression is believed to be controlled at levels both of transcription and translation. Neither the mechanism of induction nor the function of the SPs is known. The induction of SPs in two mammalian cell types after hyperthermia (43 C, 30 min) and sodium-**arsenite** treatment (50 uM) is reported in this paper. The apparent mol wts of the SPs of Reuber H35 hepatoma cells and **neuroblastoma** N2 cells were 28, 65, 70, 84, 100 kD and 68, 70, 84, 100 kD, respectively. Hyperthermia caused the breakdown of microfilaments in the H35 cells, whereas the microtubules and intermediate filaments (vimentin and keratin 18) remained intact. In the neuroblastoma N2 cells, the microfilaments remained intact, while the microtubules became disorganized. The vimentin was capped around the nucleus as a consequence of the microtubule disruption. It was concluded that no particular stress-induced alteration in the cytoskeleton is needed for induction of stress protein synthesis. (5 Refs)

AB . . . the SPs is known. The induction of SPs in two mammalian cell types after hyperthermia (43 C, 30 min) and sodium-**arsenite** treatment (50 uM) is reported in this paper. The apparent mol wts of the SPs of Reuber H35 hepatoma cells and **neuroblastoma** N2 cells were 28, 65, 70, 84, 100 kD and 68, 70, 84, 100 kD, respectively. Hyperthermia caused the breakdown. . .

L6 ANSWER 41 OF 58 CANCERLIT on STN
AN 85603550 CANCERLIT
DN 85603550
TI ASSOCIATION BETWEEN CHEMICAL PATTERNS IN SEWAGE AND MORTALITY FROM CANCER AND CARDIOVASCULAR DISEASE IN 23 STANDARD METROPOLITAN STATISTICAL AREAS.
AU Sung F C
CS University of Washington.
SO Diss Abstr Int (Sci), (1983) 44 (1) 127-B.
DT (THESIS)
LA English
FS Institute for Cell and Developmental Biology
EM 198501
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB To investigate the associations of water characteristics in sewage with 23 SMSAs mortality rates from cancers and cardiovascular diseases in 1970, data from samples of sewage obtained in 1979 and 1980 were examined. Both metallic and organic characteristics of the sewage were used. Whenever a significant simple correlation was found between a component of sewage and mortality, the corresponding partial correlation was computed after holding population and socioeconomic factors as covariates constant. The significant positive associations found include cobalt and esophageal cancer for both sexes; chromium and cancers of liver, bile ducts, and gallbladder, cobalt and leukemia, trichloromethane or total volatile organics and **cancers** of **brain** and other parts of nervous system, and trichloromethane and leukemia for males; manganese and cancers of buccal cavity and pharynx, total organic ranks and esophageal cancer, copper and **arsenic** and rectum cancer, total inorganic ranks or cobalt or pesticides and pancreas cancer, copper and cancers of other unspecified urinary organs for females. Some significant negative associations were also found. As anticipated, the mortality from ischemic heart disease was negatively associated with the hardness or hardness components. Such an association was also found with deaths from prostate cancer and leukemia for males and with total cancer death rates for both sexes. Interpretations for the hardness associations were discussed. Some covariates such as percent manufacturing industry, percent nonwhite population, and smoking could be important factors contributing to the hardness associations. However, the finding of the negative association between ischemic heart disease and hardness, for which there is much other evidence suggests that the method of using the sewage variable to examine environmental relationships to mortality has a degree of validity. The

unexplained but apparently not artifactual relationship between various metals and specific cancer rates need further study.

AB . . . both sexes; chromium and cancers of liver, bile ducts, and gallbladder, cobalt and leukemia, trichloromethane or total volatile organics and **cancers** of **brain** and other parts of nervous system, and trichloromethane and leukemia for males; manganese and cancers of buccal cavity and pharynx, total organic ranks and esophageal cancer, copper and **arsenic** and rectum cancer, total inorganic ranks or cobalt or pesticides and pancreas cancer, copper and cancers of other unspecified urinary. . .

L6 ANSWER 42 OF 58 MEDLINE on STN DUPLICATE 27
AN 82097617 MEDLINE
DN 82097617 PubMed ID: 6797987
TI [Multiple basaloma and **meningioma** following long-term **arsenic** therapy].
Multiple Basaliome und **Meningiom** nach mehrjahriger **Arsentherapie**.
AU Weiss J
SO HAUTARZT, (1981 Dec) 32 (12) 649-50.
Journal code: 0372755. ISSN: 0017-8470.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 198203
ED Entered STN: 19900317
Last Updated on STN: 19900317
Entered Medline: 19820313
TI [Multiple basaloma and **meningioma** following long-term **arsenic** therapy].
Multiple Basaliome und **Meningiom** nach mehrjahriger **Arsentherapie**.

L6 ANSWER 43 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 81187582 EMBASE
DN 1981187582
TI Excitation functions and production of arsenic radioisotopes for environmental toxicology and biomedical purposes.
AU Basile D.; Birattari C.; Bonardi M.; et al.
CS Inst. Phys., Milan, Italy
SO International Journal of Applied Radiation and Isotopes, (1981) 32/6 (403-410).
CODEN: IJARAY
CY United Kingdom
DT Journal
FS 037 Drug Literature Index
023 Nuclear Medicine
046 Environmental Health and Pollution Control
008 Neurology and Neurosurgery
LA English
AB Many **arsenic** radionuclides have come to be used as tracers in biology and in the study of environmental pollution of both water and soil. In nuclear medicine, radioactive 74As has been employed as a positron emitter for the localization of **brain tumors**, cerebral occlusive vascular lesions, arterious venous malformations, etc. The aim of the work described has been to study the excitation functions for the production of the **arsenic** radioisotopes from targets of natural germanium via nuclear reactions (p.xn).
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L6 ANSWER 44 OF 58 CANCERLIT on STN
AN 82605410 CANCERLIT
DN 82605410
TI LONG-TERM EFFECTS OF ACUTE ARSENICAL POISONING.
AU Renwick J H; Harrington J M; Dissanaike D S; Lenihan J M; Waldron H A
CS Inst. Occupational Health, Univ. Birmingham, Edgbaston, Birmingham 15, England.
SO J Soc Occup Med, (1981) 31 (4) 144-147.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Institute for Cell and Developmental Biology
EM 198204
ED Entered STN: 19941107
Last Updated on STN: 19960517
AB Responses (62) to a questionnaire sent to former university students and others who in 1943 consumed sausage meat containing arsenic (0.59 or 1.36 g arsenious oxide/kg meat) revealed three persons with rodent ulcers (basal cell carcinoma). In one patient, arsenic levels in excised skin lesions declined from 0.19 ug/g in 1965 to 0.002 ug/g in 1978. All three patients with ulcers had at least 3 yr exposure to tropical sun before any ulcer appeared, but whether retained **arsenic** had increased the patients' susceptibility to UV irradiation or whether irradiation alone had been responsible could not be determined. Among 12 subjects known to have died, two died of **neoplasms**: one with a **brain tumor** (at age 55), and one with cancer of the pharynx (at age 28). The remainder died of other causes or cause could not be obtained. (5 Refs)
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L6 ANSWER 45 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 81037167 EMBASE
DN 1981037167
TI Speech arrest and 'pure' agraphia.
AU Yashima Y.; Ishige K.; Nakanishi S.; Kumashiro H.
CS Dept. Neuropsychiat., Fukushima Med. Coll., Fukushima, Japan
SO Brain and Nerve, (1980) 32/10 (1039-1045).
CODEN: NOTOA6
CY Japan
DT Journal
FS 008 Neurology and Neurosurgery
011 Otorhinolaryngology
LA Japanese
SL English
AB This paper intends to analyse two cases of speech arrest. The patients suffer from a frontal tumor which affects the supplementary motor area; one case was accompanied by 'pure' agraphia. Case 1, a 32 year-old right-handed male, had speech arrest and 'pure' agraphia. Spontaneous speech, naming, repetition and reading are not impaired. Radiographic (CAG CT scan) and surgical localization checks were done on the paramedian left frontal lobe (which controls supplementary motor area) and a solid tumor nodule about 1.5 by 2 cm in size was detected at the base of the left second frontal convolution (F2). Writing disturbances continued until one and a half months before the tumor was removed. He cannot write his signature, do spontaneous writing, take dictation or do copying. After the

partial excision of the solid tumor nodule at the base of left F2, both speech arrest and writing disturbances were improved. Neither apraxia nor agnosia were noticed. Case 2, a 26 year-old right-handed male, had speech arrest only. Speech and writing functions were not impaired. He is intellectual. An **oligodendroglioma** was found in the left frontal lobe which affected the supplementary motor area but the lesion was not extended into the left second frontal convolution. In both cases, speech arrest was of the 'total' type according to **Arseni**'s subdivision, and verbal repetition did not appear. We realize that the lesion in the supplementary motor area causes speech arrest and that the left F2 causes 'pure' agraphia. We compare our result with similar cases in the literature, especially with 'pure' agraphia cases caused by a lesion in Exner's writing center. We conclude that 'pure' agraphia can be classified under the category of autonomic-kinesthetic disorders in writing functions caused by frontal lobe lesion.

AB . . .. a 26 year-old right-handed male, had speech arrest only. Speech and writing functions were not impaired. He is intellectual. An **oligodendroglioma** was found in the left frontal lobe which affected the supplementary motor area but the lesion was not extended into the left second frontal convolution. In both cases, speech arrest was of the 'total' type according to **Arseni**'s subdivision, and verbal repetition did not appear. We realize that the lesion in the supplementary motor area causes speech arrest. . .

L6 ANSWER 46 OF 58 MEDLINE on STN DUPLICATE 28
AN 81141501 MEDLINE
DN 81141501 PubMed ID: 7204019
TI [Multiple basaloma and **meningioma** following long-term **arsenic** therapy].
Multiple Basaliome und **Meningiom** nach mehrjahriger **Arsentherapie**.
AU Weiss J; Janner M
SO HAUTARZT, (1980 Dec) 31 (12) 654-56.
Journal code: 0372755. ISSN: 0017-8470.
CY GERMANY, WEST: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA German
FS Priority Journals
EM 198105
ED Entered STN: 19900316
Last Updated on STN: 19900316
Entered Medline: 19810528
AB A case of multiple basal-cell **carcinomas** and a **meningioma** after long-term **arsenic** ingestion is reported. A relationship between **arsenic** intake and basal-cell carcinomas is well known, whereas a **meningioma** associated with **arsenic** therapy has not been reported yet. Results of experimental tumor research could suggest a connection between **arsenic** intake and the development of a **meningioma**.
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L6 ANSWER 47 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN DUPLICATE 29
AN 1980:88903 CAPLUS
DN 92:88903

TI Effects of metal ions and selenoamino acids on induction of glutathione peroxidase in mouse neuroblastoma
AU Germain, Glen S.; Arneson, Richard M.
CS Dep. Biochem., Univ. Tennessee, Memphis, TN, 38101, USA
SO Enzyme (1979), 24(5), 337-41
CODEN: ENZYBT; ISSN: 0013-9432
DT Journal
LA English
AB The induction of glutathione peroxidase (EC 1.11.1.9) [9013-66-5] in mouse **neuroblastoma** cells by selenite was enhanced by equimolar amts. of **arsenate**, **arsenite**, molybdate, chromic, or dichromate ions. At equimolar Se concn., selenite, DL-selenocystine [2897-21-4], and D-selenomethionine [3211-76-5] induced glutathione peroxidase activities having the ratios 4:4:1. Protein synthesis inhibitors prevented the induction of glutathione peroxidase by selentite indicating that de novo protein synthesis is required.
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ST metal glutathione peroxidase neuroblastoma; selenoamino acid glutathione peroxidase neuroblastoma; selenium glutathione peroxidase neuroblastoma; **arsenic** glutathione peroxidase **neuroblastoma**; chromium glutathione peroxidase neuroblastoma; molybdenum glutathione peroxidase neuroblastoma; tellurium glutathione peroxidase

L6 ANSWER 48 OF 58 CANCERLIT on STN
AN 79700464 CANCERLIT
DN 79700464
TI OCCUPATIONAL LUNG DISEASE.
AU Jones R N; Weill H
CS Tulane Medical Center, New Orleans, LA.
SO Respir Care, (1978) 23 (10) 989-998.
ISSN: 0020-1324.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Cancer Assessment Review Committee
EM 197901
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB Occupational lung disorders are reviewed with regard to their causative agents and the pathologic responses evoked. Dust macules (which are caused by inhaling tin, barium, iron, or coal salts), pulmonary fibrosis, hypersensitivity pneumonia, beryllium lung disease, and obstructive airways diseases are discussed. Asbestos, **arsenic**, chromates, nickel radioactive inhalants, the halo ethers, and vinyl chloride monomer may induce respiratory tract tumors. Asbestos may also cause cancer of the larynx and carcinoma of the gastrointestinal tract, and **brain tumors** and hemangiosarcoma of the liver may result from exposure to vinyl chloride. The diagnosis of occupational lung disease is discussed, as is the setting and enforcement of permissible dust exposure levels. (10 Refs)
AB . . . tin, barium, iron, or coal salts), pulmonary fibrosis, hypersensitivity pneumonia, beryllium lung disease, and obstructive airways diseases are discussed. Asbestos, **arsenic**, chromates, nickel radioactive inhalants, the halo ethers, and vinyl chloride monomer may induce respiratory tract tumors. Asbestos may also cause cancer of the larynx and carcinoma of the gastrointestinal tract, and **brain tumors** and hemangiosarcoma of the liver may result from exposure to vinyl chloride. The diagnosis of occupational lung disease is

discussed,. . .

L6 ANSWER 49 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
AN 78198302 EMBASE
DN 1978198302
TI [Therapeutic intra vascular occlusion in craniofacial tumours]. L'OCCLUSION ENDO-VASCULAIRE THERAPEUTIQUE DANS LES TUMEURS CRANIO-FACIALES.
AU Picard L.; Andre J.M.; Roland J.; et al.
CS Dept. Radiol., Hop. Nancy, France
SO Concours Medical, (1977) 99/35 (5078-5089).
CODEN: COMEAO
CY France
DT Journal
FS 008 Neurology and Neurosurgery
014 Radiology
016 Cancer
LA French
AB The embolisation of cranio-cerebral tumors is now in process of acquiring an important place in the therapeutic **arsenal** we have at our disposal for contending with the tumors which depend on the external carotid artery. The ideal indications are still the preoperative embolisations of very vascular **tumors** (**meningiomas**, naso-pharyngeal fibromas, etc.) which transform the operative risk. Embolisation with the aid of radioactive substances may perhaps make intratumoral radiotherapy a practical possibility. It is at the moment a subject for research.
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L6 ANSWER 50 OF 58 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V. on STN
DUPLICATE 30
AN 77094724 EMBASE
DN 1977094724
TI Vinyl chloride associated liver disease.
AU Berk P.D.; Martin J.F.; Young R.S.; et al.
CS Sect. Dis. Liver, Dig. Dis. Branch, Nat. Inst. Arthr. Metab. Dig. Dis., NIH, Bethesda, Md. 20014, United States
SO Annals of Internal Medicine, (1976) 84/6 (717-731).
CODEN: AIMEAS
DT Journal
FS 038 Adverse Reactions Titles
037 Drug Literature Index
048 Gastroenterology
006 Internal Medicine
017 Public Health, Social Medicine and Epidemiology
035 Occupational Health and Industrial Medicine
030 Pharmacology
LA English
AB Although polyvinyl chloride has been produced from vinyl chloride monomer for more than 40 years, recognition of toxicity among vinyl chloride polymerization workers is more recent. In the mid 1960s, workers involved in cleaning polymerization tanks were found to have acro osteolysis. In 1974, the same population of workers was found to be at risk for an unusual type of hepatic fibrosis and angiosarcoma of the liver. The authors describe two cases of vinyl chloride associated liver injury, one of hepatic fibrosis and one of angiosarcoma. Histologic features of these lesions are similar to the hepatic fibrosis and angiosarcomas resulting

from chronic exposure to inorganic **arsenicals**. Preliminary studies suggest that the toxicity of vinyl chloride may result from formation, during high dose exposure, of active metabolites by mixed function oxidases of the liver. Epidemiologic studies indicate an increased incidence not only of liver disease, but also of **cancers** of the **brain**, lung and possibly other organs.

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L6 ANSWER 51 OF 58 MEDLINE on STN
AN 77108084 MEDLINE
DN 77108084 PubMed ID: 1243998
TI Immunological enhancement of chemotherapy in advanced brain cancer.
AU Rosner S
SO ACTA NEUROLOGICA LATINOAMERICANA, (1975) 21 (1-4) 126-32.
Journal code: 9421556. ISSN: 0001-6306.
CY Uruguay
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197703
ED Entered STN: 19900313
Last Updated on STN: 19900313
Entered Medline: 19770321

AB Three hundred C3H mice were used to ascertain the validity of treatment of **brain cancer** with **arsenicals** and bacterial polysaccharide. It was found that this method of therapy was efficacious. Also, that a prophylactic effect was demonstrated. 2. In 14 patients with advanced intracranial neoplasm it was found: a) that no curative effect could be brought about once the cancer had spread beyond a certain point. This "point of no return" depends on tumor type, location and degree of brain destruction and general state of debility. b) That subjective and even some temporary objective improvement was possible even in advanced cancer. Necrosis of cancer tissue, that could be attributed to the therapy, was found in a number of cases. c) That some cases of **brain cancer** showed remarkable response to this form of therapy; more so if radiation therapy was given at the time of administration of the **arsenical** and bacterial polysaccharide. d) That some cases of brain metastasis showed "complete" destruction of the **neoplasms** in the **brain** although the patient subsequently died of the primary neoplasm and multiple metastasis. e) That the principle of enhancing the deposition of the curative material in the neoplasm by the use of bacterial polysaccharide is valid. f) That if this method of treatment (i.e. **arsenical**, bacterial polysaccharide and radiation) is instituted in the "early" cancer cases we may find it to be an efficacious mode of attack. g) That aresnical by mouth and bacterial polysaccharide by I.M. injection may be useful as a prophylactic to the formation of cancer. This may be contemplated for use in families that seem to show a predisposition to cancer formation. A mode of administration would probably be somewhat similary to the maintencance therapy described in the body of this paper. h) That bacterial polysaccharides have been shown to have the ability to destroy cancers.3,9 This method of enhancing the patients antigen-antibody reaction may eventually be used as a means of gaining an efficient vaccine in cancer therapy. i) Wherever possible definitive surgery should be carried out before the **arsenical**-bacterial polysaccharide-radiation method is instituted. j) In **brain cancer**, after craniotomy with removal of all or part of the neoplasm where feasible, the patient

should be left with a subtemporal decompression. This will allow for the oedema of the brain that occurs with cerebral radiation therapy. k) That the principle of destruction of the cancer by certain special substances is valid. That the increase of affinity between cancer and destructive (curative) material can be brought about by administering a bacterial polysaccharide at the same time and that radiation therapy may enhance the beneficial effects of this method. 1) That the principle of brining the greatest toxicity to the cancer cells and the least toxic effect to the organism has been applied in the use of this method of treatment. m) That in some cases the cancer may not be destroyed by this therapy but may be made to retrogress or be held in check.

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L6 ANSWER 52 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1970:88230 CAPLUS
DN 72:88230
TI Brain tumor localization with positron-emitting isotopes
AU McQueen, J. Donald
CS Baltimore City Hosp., Baltimore, MD, USA
SO U. S. At. Energy Comm. (1969), NYO-2182-11, 8 pp. Avail.: Dep.; CFSTI From: Nucl. Sci. Abstr. 1969, 23(21), 43659
CODEN: XAERAK
DT Report
LA English
AB Protein metabolism in mouse liver was studied using 131I-labeled albumin as a tracer and differential centrifugation for the isolation of protein fractions. The hydrolysis of 131I-labeled albumin in mouse liver cells and theuptake of 131I-albumin by brain tumor cells was studied in vitro. The influence of clearance from the blood stream on brain tumor uptake of 74As-labeled arsono-poly-L-lysine and 131I-labeled albumin was studied in mice.
IT **Neoplasms**
(localization of **brain**, **arsenic**-74 and iodine-131 in)
IT **Brain, neoplasms**
(localization of, **arsenic**-74 and iodine-131 in)

L6 ANSWER 53 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1965:18241 CAPLUS
DN 62:18241
OREF 62:3303f-g,3304a
TI Tissue-concentration ratios of arsenate-74As and labeled organic conjugates
AU McQueen, J. Donald; Mego, John L.

CS Johns Hopkins Univ., Baltimore, MD
SO Journal of Neurosurgery (1964), 21(8), 641-6
CODEN: JONSAC; ISSN: 0022-3085
DT Journal
LA English
AB The tumor concns. in C-57 mice of arsenate and tryparsamide (I) followed similar courses. Highest levels appeared immediately and 15 min. after injection. There was a sharp decline during the first 4 hrs. Arsenate values fell from 2.70 (% of injected dose/g. of tumor) at 15 min., to 0.65% in 4 hrs.; I dropped from 2.87 to 0.18% in the same period. The initial arsonopolylysine (II) values were lower than those of the above and rose to 2%. All compds. passed into the brain sparingly. Arsenate concns. were relatively high. The **tumor**-to-**brain** ratios of **arsenate** were 7:1 at 1-3 hrs.; I ratios were 33:1 at 1 hr. and 14:1 at 3 hrs.; and II ratios were 14:1 at 2 hrs. and 21:1 at 7 hrs. The tumor-to-muscle ratios of arsenate and I were .apprx.2:1. II was const. at 0.6-1.0% for 8 days. Blood-clearance patterns for arsenate and I indicated a rapid loss of org. material. II concn. in liver was 35% in 4 hrs.; in the kidney, it was .apprx.10% for 8 days.
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L6 ANSWER 54 OF 58 CANCERLIT on STN
AN 65700419 CANCERLIT
DN 65700419
TI CANCER IN AFRICA, ESPECIALLY IN REGIONS SOUTH OF THE SAHARA.
AU Oettle A G
CS Nat. Cancer Assn. S. Africa, Johannesburg.
SO J Natl Cancer Inst, (1964) 33 (3) 383-439.
ISSN: 0027-8874.
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Cancer Assessment Review Committee
EM 197512
ED Entered STN: 19941107
Last Updated on STN: 19941107
AB Striking differences are reported in cancer incidence, situation and histopathological type between and within races of Africa. The hypothesis of the uniform liability of mankind to cancer is questioned by the fact that Negriform races (half-Hamites, Nilotic and W. African Negroes, pygmies and Bantu-speaking) generally have a much lower incidence than that seen in Western races (in which the data suggest that 80% or more of the cancers are environmentally-induced and potentially preventable) or in U.S nonwhites. Common to the Negriform races are primary cancer of the liver, Kaposi's sarcoma, Burkitt's tumor and (in some regions) esophageal cancer, while leukemia and cancers of the stomach, large intestine, breast, endometrium, ovary and brain are generally rare. Mixed races (colored) show high rates of stomach and liver cancer. Asians have a lower mortality, while South African whites resemble U.S whites, except for higher rates of lip, tongue, stomach, prostate, skin and bone cancer in the former group. The etiological aspects of various tumors are discussed with regard to lymphomas and cancer of the lip (sunlight and tobacco),

mouth, postnasal space, esophagus, liver (fungal toxins?), sinuses (snuff), lung (smoking, **arsenic**), mesothelium (asbestos), uterus, penis (circumcision, ablution), bladder (bilharziasis), prostate, skin (sunlight, tropical ulceration, other ulcers), eye, conjunctiva (sunlight) and **brain**. The influences of westernization on **cancer** incidence in African Negroes is also discussed.

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L6 ANSWER 55 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1963:423947 CAPLUS
DN 59:23947
OREF 59:4369d-e
TI Uptake of As74-labeled arsonazoproteins in tissues of tumor-bearing mice
AU Mego, John L.; McQueen, J. Donald
CS Johns Hopkins Univ., Baltimore, MD
SO Cancer Research (1963), 23, 523-30
CODEN: CNREA8; ISSN: 0008-5472
DT Journal
LA Unavailable
AB Arsanilate-As74 was used as a tracer in tissue-uptake studies in order to obtain increased localization of the isotope in brain tumors of mice. In terms of arsanilate, the uptake of a label into tumor from azoprotein approached that of uncoupled material only with the use of extensively labeled protein. Large, persistent accumulations of arsonazoalbumin-As74 were found in liver and kidney even with as little as 1-2 moles arsanilate/mole protein. The uptake in kidney and the rate of disappearance of injected arsonazoalbumin-As74 from blood varied directly with the amt. of arsanilate bound to protein. The correlation between these factors was poor for liver and tumor and negative for muscle.
IT Albumins
(**arsensic** derives., formation in tissues by **neoplasm** of **brain**)
IT 7440-38-2, **Arsenic**
(isotope of mass 74, as indicator of arsonazoprotein metabolism by **neoplasm** of **brain**)

L6 ANSWER 56 OF 58 MEDLINE on STN
AN 62012973 MEDLINE
DN 62012973
TI Use of radioactive **arsenic** (As74) in the diagnosis of suvatentorial **brain tumours**.
AU BOTTERELL E H; LOUGHEED W M; MORLEY T P; TASKER R R
SO Canad Med Ass J, (1961 Dec 16) 85 1321-8.
DT Journal
LA English
FS OLDMEDLINE
EM 196212
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI Use of radioactive **arsenic** (As74) in the diagnosis of suvatentorial **brain tumours**.

L6 ANSWER 57 OF 58 MEDLINE on STN
AN 60085831 MEDLINE
DN 60085831
TI **Brain tumour** detection using radioactive **arsenic**.
AU MALLARD J R; FOWLER J F; SUTTON M

SO Brit J Radiol, (1961 Sep) 34 562-8.
DT Journal
LA English
FS OLDMEDLINE
EM 196112
ED Entered STN: 19990716
Last Updated on STN: 19990716
TI **Brain tumour** detection using radioactive **arsenic**.

L6 ANSWER 58 OF 58 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1958:2783 CAPLUS
DN 52:2783
OREF 52:565c-d
TI Tumor localization with radioisotopes
AU King, E. R.; Henkelmann, C. R.
CS U.S. Naval Med. School, Bethesda, MD
SO Southern Medical Journal (1957), 50, 1096-1105
CODEN: SMJOAV; ISSN: 0038-4348
DT Journal
LA Unavailable
AB A description of methods and results from the use of I131 in thyroid tumors, P32 in eye, breast, and brain tumors, Ga72 or Ga67, As74, K42, and Cu64 in brain tumors. Labeling media included rose bengal, RISA, and diiodofluorescein.
IT 14304-78-0, **Arsenic**, isotope of mass 74
(as indicator of **neoplasm** in **brain**)